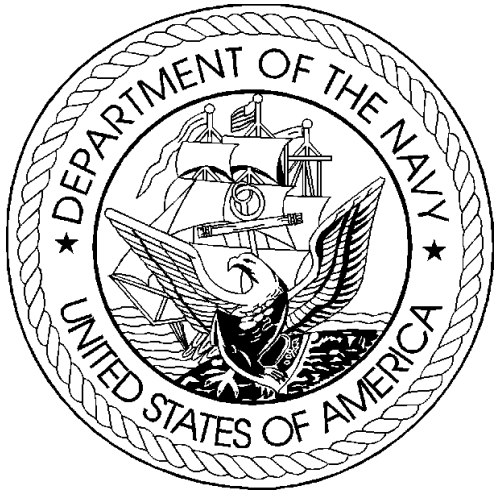
DEPARTMENT OF THE NAVY
FY 1999 AMENDED BUDGET ESTIMATES



JUSTIFICATION OF ESTIMATES
FEBRUARY 1998

OTHER PROCUREMENT, NAVY
BUDGET ACTIVITY 4

Errata Sheet

Other Procurement, Navy---BA4

For P-1 Line Item # 164, Industrial Facilities/Calibration Equipment, in the first column of the P-5, only the first four (4) numbers that are labeled and the “total” line should be included. The remaining non-labeled numbers on the bottom half were erroneously included and should be omitted.

Department of the Navy

FY 1999 Procurement Program — Exhibit P-1

APPROPRIATION: 1810N Other Procurement, Navy — DATE: 01/23/98

LINE NO	ITEM NOMENCLATURE	IDENT CODE	(DOLLARS) FY 1999 UNIT COST	TOA, $ IN MILLIONS FY 1997 QUANTITY	FY 1997 COST	FY 1998 QUANTITY	FY 1998 COST	FY 1999 QUANTITY	FY 1999 COST	SE C
	BUDGET ACTIVITY 04: Ordnance Support Equipment									
	Ship Gun System Equipment									
141	5110 Gun Fire Control Equipment	A			10.2		9.5		20.2	U
	Ship Missile Systems Equipment									
142	5208 MK-92 Fire Control System	A			1.8		.9		1.0	U
143	5227 HARPOON Support Equipment	A			.1		.2		-	U
144	5233 TARTAR Support Equipment	A			-		-		.*	U
145	5234 Point Defense Support Equipment	A			-		-		.*	U
146	5235 Airborne ECM/ECCM	A			.3		-		-	U
147	5236 Engagement Systems Support	A			13.0		3.3		.3	U
148	5237 NATO Seasparrow	A			4.6		12.5		5.2	U
149	5238 RAM GMLS	A			44.7		66.5		59.8	U
150	5239 Ship Self Defense System	B			18.0		17.5		22.9	U
151	5246 AEGIS Support Equipment	A			31.3		20.7		83.2	U
152	5250 Surface TOMAHAWK Support Equipment	A			83.7		58.6		90.2	U
153	5255 Submarine TOMAHAWK Support Equip	A			-		1.4		4.0	U
154	5260 Vertical Launch Systems	A			12.6		7.4		7.8	U
	FBM Support Equipment									
155	5355 Strategic Platform Support Equip	A			2.1		2.3		3.0	U
156	5358 Strategic Missile Systems Equip	A			124.2		219.4		283.6	U
157	5530 Anti-ship Missile Decoy System	A			23.6		17.9		21.5	U
	ASW Support Equipment									

* ITEMS UNDER $50,000

Department of the Navy

FY 1999 Procurement Program — Exhibit P-1

APPROPRIATION: 1810N Other Procurement, Navy — DATE: 01/23/98

LINE NO	ITEM NOMENCLATURE	IDENT CODE	(DOLLARS) FY 1999 UNIT COST	TOA, $ IN MILLIONS FY 1997 QUANTITY	FY 1997 COST	FY 1998 QUANTITY	FY 1998 COST	FY 1999 QUANTITY	FY 1999 COST	S E C
158 5420	SSN Combat Control Systems	A			14.1		19.0		17.5	U
159 5431	Submarine ASW Support Equipment	A			9.8		3.4		3.7	U
160 5449	Surface ASW Support Equipment	A			8.2		5.8		5.0	U
161 5455	ASW Range Support Equipment	A			2.4		3.4		4.6	U
	Other Ordnance Support Equipment									
162 5509	Explosive Ordnance Disposal Equip	B			6.2		7.3		7.3	U
163 5518	Unmanned Seaborne Target	A			-		2.2		2.0	U
164 5542	Industrial Facilities (Calibration Equipment)	A			1.6		1.3		1.0	U
165 5545	Stock Surveillance Equipment	A			1.4		1.3		1.4	U
	Other Expendable Ordnance									
166 5635	Fleet Mine Support Equipment	A			5.2		5.0		.*	U
167 5660	Surface Training Device Mods	A			2.4		8.6		5.9	U
168 5661	Submarine Training Device Mods	A			19.2		22.5		23.8	U
169 5665	Industrial Depot Maintenance	A			20.1		-		-	U
	TOTAL Ordnance Support Equipment				460.9		517.9		674.7	

* ITEMS UNDER $50,000

Other Procurement, Navy
Program and Financing (in Thousands of dollars)

Identification code 17-1810-0-1-051	Budget Plan (amounts for PROCUREMENT actions programed)			Obligations		
	1997 actual	1998 est.	1999 est.	1997 actual	1998 est.	1999 est.
Program by activities:						
Direct program:						
00.0101 Ships support equipment	805,171	721,811	963,074	726,987	665,888	852,505
00.0201 Communications and electronics equipment	1,009,472	1,165,616	1,530,802	1,112,627	1,100,628	1,522,885
00.0301 Aviation support equipment	210,756	188,669	245,663	241,254	166,320	221,064
00.0401 Ordnance support equipment	460,886	517,909	674,703	430,909	472,834	593,825
00.0501 Civil engineering support equipment	38,865	46,404	69,902	46,043	39,870	60,686
00.0601 Supply support equipment	67,170	51,902	108,905	84,329	54,112	91,963
00.0701 Personnel and command support equipment	48,732	79,788	65,660	110,527	67,150	61,813
00.0801 Spares and repair parts	196,921	215,975	279,028	188,178	184,644	249,408
00.9101 Total direct program	2,837,973	2,988,074	3,937,737	2,940,854	2,751,446	3,654,149
01.0101 Reimbursable program	53,283	42,000	42,000	50,987	45,439	42,000
10.0001 Total	2,891,256	3,030,074	3,979,737	2,991,841	2,796,885	3,696,149
Financing:						
Offsetting collections from:						
11.0001 Federal funds(-)	-1,014	-42,000	-42,000	3,472	-42,000	-42,000
14.0001 Non-Federal sources(-)	-52,269			-51,869		
17.0001 Recovery of prior year obligations				-56,565		
Unobligated balance available, start of year:						
21.4002 For completion of prior year budget plans				-496,308	-430,674	-663,863
21.4003 Available to finance new budget plans	-17,237	-16,677		-17,237	-16,677	
21.4009 Reprograming from/to prior year budget plan	-16,727					
22.1001 Unobligated balance transferred to other acco	4,200	11,177		4,200	11,177	
Unobligated balance available, end of year:						
24.4002 For completion of prior year budget plans				430,674	663,863	947,451
24.4003 Available to finance subsequent year budget	16,677			16,677		
25.0001 Unobligated balance expiring	9,227			9,227		
39.0001 Budget authority	2,834,113	2,982,574	3,937,737	2,834,113	2,982,574	3,937,737
Budget authority:						
40.0001 Appropriation	3,036,268	3,144,205	3,937,737	3,036,268	3,144,205	3,937,737
40.3601 Appropriation rescinded (unob bal)		-5,500			-5,500	
40.7601 Reduction pursuant to P.L. 105-56 (-), 8035		-56,735			-56,735	
41.0001 Transferred to other accounts (-)	-218,321	-99,396		-218,321	-99,396	
42.0001 Transferred from other accounts	16,166			16,166		
43.0001 Appropriation (adjusted)	2,834,113	2,982,574	3,937,737	2,834,113	2,982,574	3,937,737

Other Procurement, Navy
Program and Financing (in Thousands of dollars)

Identification code 17-1810-0-1-051	Budget Plan (amounts for PROCUREMENT actions programed)			Obligations		
	1997 actual	1998 est.	1999 est.	1997 actual	1998 est.	1999 est.
Relation of obligations to outlays:						
71.0001 Obligations incurred				2,943,444	2,754,885	3,654,149
72.1001 Orders on hand, SOY				-86,326	-89,947	-89,947
72.4001 Obligated balance, start of year				3,793,123	3,407,474	3,129,392
74.1001 Orders on hand, EOY				89,947	89,947	89,947
74.4001 Obligated balance, end of year				-3,407,474	-3,129,392	-3,542,101
77.0001 Adjustments in expired accounts (net)				-222,581		
78.0001 Adjustments in unexpired accounts				-56,565		
90.0001 Outlays (net)				3,053,568	3,032,967	3,241,440

Other Procurement, Navy
Object Classification (in Thousands of dollars)

Identification code 17-1810-0-1-051		1997 actual	1998 est.	1999 est.
	Direct obligations:			
122.001	Transportation of things	7,310	3,930	5,043
125.101	Advisory and assistance services	30,999	24,754	27,781
	Purchases goods/services (inter/intra) Fed accounts			
125.303	Purchases from revolving funds	661,438	989,796	1,469,053
126.001	Supplies and materials	403,528	445,181	659,263
131.001	Equipment	1,837,579	1,287,785	1,493,009
199.001	Total Direct obligations	2,940,854	2,751,446	3,654,149
	Reimbursable obligations:			
231.001	Equipment	50,987	45,439	42,000
299.001	Total Reimbursable obligations	50,987	45,439	42,000
999.901	Total obligations	2,991,841	2,796,885	3,696,149

Comparison of FY 1998 Financing as reflected in FY 1998 Budget with 1998 Financing as Shown in the FY 1999 Budget

($ In Thousands)

	Financing Per FY 1998 Budget	**Financing Per FY 1999 Budget**	**Increase (+) or Decrease (-)**
Program Requirements (Total)	$2,867,500	$3,030,074	+$162,574
Program Requirements (Service Account)	($2,825,500)	($2,988,074)	(+162,574)
Program Requirements (Reimbursable)	($42,000)	($42,000)	0
Appropriation (Adjusted)	**$2,825,500**	**$2,982,574**	**+$157,074**

Explanation of Changes in Financing

The Fiscal Year 1998 program has changed since the presentation of the FY 1998 budget as noted below:

1. Program Requirements. There has been a net increase to the appropriation (adjusted) of +$157,074. This net change is comprised of an increase in program requirements (+$162,574), less rescissions of (-$5,500).

Comparison of FY 1998 program requirements as reflected in the FY 1998 Budget with FY 1998 program requirements as shown in the FY 1999 Budget

Summary of Requirements ($ in Thousands)

	Total Program Requirements per FY 1998 Budget	**Total Program Requirements per FY 1999 Budget**	**Increase (+) or Decrease (-)**
Ships Support Equipment	$771,120	$721,811	-$49,309
Communications and Electronic Equip	925,763	1,165,616	+239,853
Aviation Support Equipment	169,250	188,669	+19,419
Ordnance Support Equipment	539,662	517,909	-21,753
Civil Engineering Support Equip	53,610	46,404	-7,206
Supply Support Equipment	56,528	51,902	-4,626
Personnel and Command Support Equip	60,850	79,788	+18,938
Spares and Repair Parts	248,717	215,975	-32,742
Total Fiscal Year Program	$2,825,500	$2,988,074	+$162,574

Explanation by Budget Activity
($ in Thousands)

1. Ships Support Equipment (-$49,309) - Changes reflect FY 1997 Congressional reductions (-$54,066), Congressional increases (+$30,500), reductions for equipment installation on decommissioned ships (-$6,334), and Department of the Navy (DoN) offsets for higher priority programs (-$19,409).

2. Communications and Electronics Equipment (+$239,853) - Changes reflect FY 1997 Congressional reductions (-$43,141), Congressional increases(+$297,500), and DoN offsets for higher priority programs (-$14,506).

Comparison of FY 1998 program requirements as reflected in the FY 1998 Budget with FY 1998 program requirements as shown in the FY 1999 Budget

Explanation by Budget Activity (Continued)
($ in Thousands)

3. Aviation Support Equipment (+$19,419) - Changes reflect FY 1997 Congressional reductions (-$8,871), Congressional increases(+$40,350), and DoN offsets for higher priority programs (-$12,060).

4. Ordnance Support Equipment (-$21,753) - Changes reflect FY 1997 Congressional reductions (-$24,463), Congressional increases(+$31,000), and DoN offsets for higher priority programs (-$28,290).

5. Civil Engineering Support Equipment (-$7,206) - Changes reflect FY 1997 Congressional reductions (-$4,833), Congressional increases(+$4,500), a below threshold reprogramming (BTR) action (-$4,100), and DoN offsets for higher priority programs (-$2,773) .

6. Supply Support Equipment (-$4,626) - Changes reflect FY 1997 Congressional reductions (-$1,301), minor BTR (-$1,763), and DoN offsets for higher priority programs (-$1,562).

7. Personnel and Command Support (+$18,938) - Changes reflect Congressional reductions (-$1,914), Congressional increases of (+$21,500), and DoN offsets for higher priority programs (-$648).

8. Spare and Repair Parts (-$32,742) - Changes reflect FY 1997 Congressional reductions (-$24,791) and DoN offsets for higher priority programs (-$7,951).

Comparison of FY 1997 Financing as reflected in FY 1998 Budget with 1997 Financing as Shown in the FY 1999 Budget

($ In Thousands)

	Financing Per FY 1998 Budget	**Financing Per FY 1999 Budget**	**Increase (+) or Decrease (-)**
Program Requirements (Total)	$2,934,355	$2,891,256	-$43,099
Program Requirements (Service Account)	($2,892,355)	($2,837,973)	(-54,382)
Program Requirements (Reimbursable)	($42,000)	($53,283)	(+11,283)
Appropriation (Adjusted)	**$2,882,355**	**$2,834,113**	**-$48,242**

Explanation of Changes in Financing

The Fiscal Year 1997 program has changed since the presentation of the FY 1998 budget as noted below:

1. Program Requirements. There has been a net decrease to the appropriation (adjusted) of (-$48,242). This net change is comprised of an decrease in program requirements (-$54,382) partially offset by an increase in reimbursable authority of (+$11,283).

Comparison of FY 1997 program requirements as reflected in the FY 1998 Budget with FY 1997 program requirements as shown in the FY 1999 Budget

Summary of Requirements
($ in Thousands)

	Total Program Requirements per FY 1998 Budget	**Total Program Requirements per FY 1999 Budget**	**Increase (+) or Decrease (-)**
Ships Support Equipment	$815,611	$805,171	-$10,440
Communications and Electronic Equip	1,044,672	1,009,472	-35,200
Aviation Support Equipment	249,793	210,756	-39,037
Ordnance Support Equipment	468,410	460,886	-7,524
Civil Engineering Support Equip	43,943	38,865	-5,078
Supply Support Equipment	67,709	67,170	-539
Personnel and Command Support Equip	0	48,732	+48,732
Spares and Repair Parts	202,217	196,921	-5,296
Total Fiscal Year Program	$2,892,355	$2,837,973	-$54,382

Explanation by Budget Activity

($ In Thousands)

1. SHIP SUPPORT EQUIPMENT (-$10,440) - Net decrease reflecting (-$1,061) offset for MPN prior approval reprogramming action, FY 1997 Supplemental Appropriation adjustment for revised economic assumptions (-$2,556), and below threshold reprogramming (BTR) actions (-$6,823) including (-$3,338) to finance unfunded Investment/expense items in Budget Activity (BA) Seven, Personnel and Command Support.

Explanation by Budget Activity (Continued)
($ In Thousands)

2. COMMUNICATIONS & ELECTRONIC EQUIPMENT (-$35,200) - Net decrease reflecting (-$9,732) offset for MPN prior approval reprogramming action, FY 1997 Supplemental Appropriation adjustment for revised economic assumptions (-$2,555), increase of (+$1,166) for Counter Drug Interdiction, Congressional rescission of SHINCOM (-$2,200), transfer of NSIPS (-$24,477) to BA-7, Personnel and Command Support, transfer for AEGIS, TBMD, CEC (-$6,202), and net BTR actions of (+$8,800).

3. AVIATION SUPPORT EQUIPMENT (-$39,037) - Net decrease reflecting (-$1,424) offset for MPN prior approval reprogramming action, FY 1997 Supplemental Appropriation adjustment for revised economic assumptions (-$590), Omnibus Reprogramming Action offsets (-$29,239), transfer for AEGIS, TBMD, CEC (-$3,700), and net BTR reductions of (-$4,084).

4. ORDNANCE SUPPORT EQUIPMENT (-$7,524) - Net decrease reflecting (-$4,389) offset for MPN prior approval reprogramming action, FY 1997 Supplemental Appropriation adjustment for revised economic assumptions (-$1,370), and net BTR reductions of (-$1,765).

5. CIVIL ENGINEERING SUPPORT (-$5,078) - Net decrease reflecting (-$4,000) offset for MPN prior approval reprogramming action, FY 1997 Supplemental Appropriation adjustment for revised economic assumptions (-$950), and minor BTR reductions of (-$128).

6. SUPPLY SUPPORT EQUIPMENT (-$539) - Net decrease reflecting (-$500) offset for MPN prior approval reprogramming action, FY 1997 Supplemental Appropriation adjustment for revised economic assumptions (-$204), and minor BTR increases of (+$165).

7. PERSONNEL & COMMAND SUPPORT (+$48,732) - Increase reflecting transfer of NSIPS (+$24,477) from BA-2, Communications and Electronic Equipment, and funding increases for Investment/Expense items (+$24,255).

8. SPARES & REPAIR PARTS (-$5,296) - Net decrease reflecting (-$1,083) offset for MPN prior approval reprogramming action, FY 1997 Supplemental Appropriation adjustment for revised economic assumptions (-$614), transfer for AEGIS, TBMD, CEC (-$1,275), and net BTR reductions of (-$2,324).

BUDGET ITEM JUSTIFICATION SHEET P-40	DATE: February 1998
APPROPRIATION/BUDGET ACTIVITY **Other Procurement, Navy/BA-4 Ordnance Support Equipment**	**P-1 ITEM NOMENCLATURE/LINE ITEM #** **GUN FIRE CONTROL EQUIPMENT (GFCE) - 5110**
Program Element for Code B Items:	**OTHER RELATED PROGRAM ELEMENTS**

	Prior Years	ID Code	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total
QUANTITY												0
EQUIPMENT COST (In Millions)		A	$4.0	$10.2	$9.5	$20.2	$18.3	$22.8	$28.1	$36.4	TBD	$149.4
SPARES COST (In Millions)			$0.3	$0.0	$1.9	$2.0	$2.0	$0.9	$1.0	$1.0	TBD	$9.0

PROGRAM DESCRIPTION/JUSTIFICATION:

Description: (U) This program provides for procurement of equipment, materials and Ordnance Alterations (ORDALTS) to improve combat effectiveness of and maintain logistic supportability of Gun Fire Control Systems (GFCS) installed on 71 ships (65 MK 86; 6 MK 160) and 9 shore installations (8 MK 86; 1 MK 160).

UK009 Switchboard ORDALTs - Procures ORDALTs for GFCS MK 86 Switchboards to improve weapon and combat system data switching capability; provides concurrent changes with other ORDALTs; and provides technical documentation upgrades required by interfacing system/equipment ORDALTs.

UK024 RMA (Reliability, Maintainability and Availability) MK 86 - Procures product Improvement ORDALTs for GFCS MK 86 to correct problems reported by fleet units; upgrade unreliable components and replace obsolete components and parts no longer in production. Installations to be in ship classes with MK 86 configuration. MK 86 ORDALTs were procured in prior years and are being installed in blocks to reduce total installation costs.

UK039 Night Vision Devices - Procures new Night Vision Devices (NVD) for ships and shore sights. Provides repair or replacement of NVD and NVD Test Equipment.

UK040 AN/SPQ-9B Radar MK 86 - Procures AN/SPQ-9 improvement ORDALTS (AN/SPQ-9B Radar) to add Anti-Ship Missile Defense (ASMD) capability which increases the radar capability to detect and track low-flying, very small cross-section targets in natural and man-made clutter. Installations to be performed by AIT in the following ship classes: QTY=27 CG-47; QTY=1 Trainer; QTY=1 CVN-68; QTY=1 AEGIS CSEDS and QTY=1 AEGIS LBTS.

UK041 AN/SPQ-9B Non-recurring Contractor Production Support - Supports AN/SPQ-9B Radar Contractor training documentation/support, Production Drawings and Data efforts.

UK042 AN/SPQ-9B GFM - U.S. Air Force APG-68 Transmitter used in AN/SPQ-9B Radar configuration.

UK043 AN/SPQ-9B 2J COG - AN/SPQ-9B Radar procurement of Antenna Assembly, Radome Assembly, Exciter Assembly, Receiver Mod Assembly, Processor Set, and Pedestal Assembly.

BUDGET ITEM JUSTIFICATION SHEET P-40 CONTINUATION	DATE: February 1998
APPROPRIATION/BUDGET ACTIVITY Other Procurement, Navy/BA-4 Ordnance Support Equipment	P-1 ITEM NOMENCLATURE/LINE ITEM # GUN FIRE CONTROL EQUIPMENT (GFCE) - 5110

UK830 AN/SPQ-9B Production Support - Supports AN/SPQ-9B Radar program and contractor associated areas.

UK5IN/UK6IN - Installation of Equipments - Provides funding to install ORDALTs, field changes ages and other alterations in ships (Fleet Modernization Program - FMP) and shore sites (Non-fleet Modernization Program - NON-FMP)

WEAPONS SYSTEM COST ANALYSIS P-5	Weapon System	DATE: February 1998
APPROPRIATION/BUDGET ACTIVITY: Other Procurement, Navy/BA-4 Ordnance Support Equipment	ID Code	P-1 ITEM NOMENCLATURE/SUBHEAD: GUN FIRE CONTROL EQUIPMENT (GFCE) - 14UK

TOTAL COST IN THOUSANDS OF DOLLARS

COST CODE	ELEMENT OF COST	ID Code	FY 1997 QTY	FY 1997 UNIT COST	FY 1997 TOTAL COST	FY 1998 QTY	FY 1998 UNIT COST	FY 1998 TOTAL COST	FY 1999 QTY	FY 1999 UNIT COST	FY 1999 TOTAL COST
	N864 SPONSOR										
	EQUIPMENT										
UK009	Switchboard O/A's MK 86	A						47			48			47
UK024	RMA MK 86							2,013			1,359			553
UK039	Night Vision Devices							471			471			535
	INSTALL										
UK5IN	Installation of Eqmt.-- FMP (RMA MK 86)							1,027						696
UK6IN	Installation of Eqmt-- NON FMP (RMA MK 86)													
	N864 SPONSOR TOTAL							**3558**			**1878**			**1831**
	N865 SPONSOR										
	EQUIPMENT										
UK040	AN/SPQ-9B Radar MK 86	A				1	***4007***	4,007	1	***4140***	4,140	5	***3000.6***	15,003
UK040	GFM-Pedestal Removal/Refurbment					1	***72***	72	1	***109***	109	5	***109***	545
UK041	AN/SPQ-9B N/R Contractor Production Support							0			0			0
UK040	GFM--APS-68 Radar Transmitter	A				2	***270***	540	1	***280***	280	4	***295***	1,180
UK043	2J COG SPQ-9B Radar Antenna components							1,195			0			
UK830	AN/SPQ-9B Production Support							634			2,488			1,000
UK900	Consulting Services							150			215			214
	INSTALL										
UK5IN	Installation of Eqmt.-- FMP (AN/SPQ-9B)													
UK6IN	Installation of Eqmt-- NON FMP (AN/SPQ-9B)								1	***419***	419	1		430
	N865 SPONSOR TOTAL							**6598**			**7651**			**18372**
TOTAL								**10,156**			**9,529**			**20,203**

BUDGET PROCUREMENT HISTORY AND PLANNING EXHIBIT (P-5A)	Weapon System	A. DATE
		February 1998

B. APPROPRIATION/BUDGET ACTIVITY	C. P-1 ITEM NOMENCLATURE	SUBHEAD
Other Procurement, Navy/BA-4 Ordnance Support Equipment	GUN FIRE CONTROL EQUIPMENT (GFCE)	14UK

Cost Element/ FISCAL YEAR	QTY	UNIT COST (000)	LOCATION OF PCO	RFP ISSUE DATE	CONTRACT METHOD & TYPE	CONTRACTOR AND LOCATION	AWARD DATE	DATE OF FIRST DELIVERY	SPECS AVAILABLE NOW	IF NO WHEN AVAILABLE
FISCAL YEAR (97)		*								
UK040 AN/SPQ-9B Radar	1	4,007	NAVSEA	Jun-97 OPTION	FFP	NORDEN SYSTEMS, INC. MELVILLE, NY	JUN 97	DEC 98	YES	
UK040 GFM--APG-68 Xmtr	2	270	NSWC CRANE	Mar-97	MILSTRIP	HILL AIR FORCE ODGEN, UTAH	MAR 97	JUNE 97	YES	
UK040 GFM--Pedestal refurb.	1	72	NAVSEA	Aug 97	W R	NSWC PHD	Aug 97	APR 98	YES	
FISCAL YEAR (98)										
UK040 AN/SPQ-9B Radar	1	4,140	NAVSEA	Nov-97 OPTION	FFP	NORDEN SYSTEMS, INC. MELVILLE, NY	APR 98	AUG 99	YES	
UK040 GFM--APG-68 Xmtr	1	280	NSWC CRANE	MAR 98	MILSTRIP	HILL AIR FORCE ODGEN, UTAH	MAR 98	SEPT 98	YES	
UK040 GFM--Pedestal refurb.	1	109	NAVSEA	Aug 97	W R	NSWC PHD	NOV 97	APR 98	YES	
FISCAL YEAR (99)										
UK040 AN/SPQ-9B Radar	5	3,001	NAVSEA	Sep-98	SS/FFP	NORDEN SYSTEMS, INC. MELVILLE, NY	MAR 99	MAY 00	YES	
UK040 GFM--APG-68 Xmtr	4	295	NSWC CRANE	MAR 99	MILSTRIP	HILL AIR FORCE ODGEN, UTAH	MAR 99	SEPT 99	YES	
UK040 GFM--Pedestal refurb.	5	109	NAVSEA	Aug 97	W R	NSWC PHD	NOV 98	APR 99	YES	

D. REMARKS

* FY-97 UNIT COST INCLUDES ONE-TIME NON-RECURRING START-UP COSTS.

CLASSIFICATION: **UNCLASSIFIED**

P3A **INDIVIDUAL MODIFICATION**

MODELS OF SYSTEM AFFECTED: MK 86 GFCS Mod 9, 10, 12 TYPE MODIFICATION: N/A MODIFICATION TITLE: AN/SPQ-9B Radar Improvement to MK 86 Gun Fire Control System (GFCS)

DESCRIPTION/JUSTIFICATION:

Adds Anti-Ship Missile Defense mode; detects and tracks low-flying, extremely small radar cross-section targets in clutter.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: **MS IV/II 10/94; CA 10/94; CDR 7/95; DT/OT 04/98; MS III 3/99.**

	FY 1994 & Prior		FY 1995		FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$
FINANCIAL PLAN (IN MILLIONS)																								
RDT&E	0	14.9	2	6.3	0	12.9	0	19.6	0	3.6	0	2.7	0	0.5	0	0.0	0	0.0	0	0.0	0	0.0	2	60.5
PROCUREMENT																								0.0
INSTALLATION KITS																								0.0
INSTALLATION KITS NONRECURRING																								0.0
EQUIPMENT			0	0.00	0	0.0					4	13.6	3	10.5	4	14.5	6	21.7	9	28.6	0	0.0	26	88.9
EQUIPMENT NONRECURRING										0.0				1.3		0.8								2.1
ENGINEERING CHANGE ORDERS																								0.0
DATA																								0.0
TRAINING EQUIPMENT							1	5.8	1	4.5	1	3.1											3	13.5
SUPPORT EQUIPMENT																								0.0
PRODUCTION SUPPORT								0.6		2.5		1.0		1.0		1.0		1.0		1.0		1.0		9.1
OTHER																								0.0
OTHER (CSS SUPPORT)		0.2		0.1		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	0	0.2		2.1
INTERIM CONTRACTOR SUPPORT																								
INSTALL COST		0.0		0.0		0.0		0.0		0.4		0.4		3.2		2.2		2.9		4.5		8.0	29	21.7
TOTAL PROCUREMENT	**0**	**0.2**	**0**	**0.1**	**0**	**0.2**	**1**	**6.6**	**1**	**7.7**	**5**	**18.4**	**3**	**16.2**	**4**	**18.7**	**6**	**25.9**	**9**	**34.3**	**0**	**9.2**		137.4

P3A (Continued) **INDIVIDUAL MODIFICATION (Continued)**

MODELS OF SYSTEMS AFFECTED: MK 86 GFCS Mod 9, 10, 12 MODIFICATION TITLE: AN/SPQ-9B Radar Improvement to MK 86 Gun Fire Control System (GFCS)

INSTALLATION INFORMATION: **ALTERATION INSTALLATION TEAM (AIT)**
METHOD OF IMPLEMENTATION:
ADMINISTRATIVE LEADTIME: 6 Months PRODUCTION LEADTIME: 14 Months
CONTRACT DATES: FY 1997: June 1997 FY 1998: November 1997 FY 1999: March 1999
DELIVERY DATE: FY 1997: December 1998 FY 1998: March 1999 FY 1999: May 2000

($ in Millions)

Cost:	Prior Years		FY 1995		FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
PRIOR YEARS																							0	0.0
FY 1995 EQUIPMENT																							0	0.0
FY 1996 EQUIPMENT																							0	0.0
FY 1997 EQUIPMENT									* 1	0.4													1	0.4
FY 1998 EQUIPMENT											* 1	0.4											1	0.4
FY 1999 EQUIPMENT													* 5	3.2									5	3.2
FY 2000 EQUIPMENT															3	2.2							3	2.2
FY 2001 EQUIPMENT																	4	2.9					4	2.9
FY 2002 EQUIPMENT																			5	3.7	1	0.8	6	4.5
FY 2003 EQUIPMENT																					9	7.2	9	7.2
TO COMPLETE																					0	0.0	0	0.0

* INCLUDES ONE SHORE SITE UNIT

INSTALLATION SCHEDULE: SHIP AVAILABILITIES

	FY 1996 & Prior	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001				FY 2002				FY 2003				TC	TOTAL
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		
In	0	0	0	0	0	0	0	1	0	0	0	1	0	0	2	2	0	1	1	1	0	2	1	1	0	0	3	3	0	10	29
Out	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	2	2	0	1	1	1	0	2	1	1	0	0	3	3	10	29

P3A **INDIVIDUAL MODIFICATION**

MODELS OF SYSTEM AFFECTED: GFCS MK 86 TYPE MODIFICATION: Mods 9, 10, 12 MODIFICATION TITLE: MK86; Gun Fire Control Equipment ORDALTs

DESCRIPTION/JUSTIFICATION:

Provides Product Capability, Safety, and Survivability with RMA Improvements.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: **Continuous Improvements to GFCS MK 86**

	FY 1994 & Prior		FY 1995		FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$
FINANCIAL PLAN (IN MILLIONS)																								
RDT&E																							0	0.0
PROCUREMENT																								0.0
INSTALLATION KITS	1130	12.4	54	1.60	50	1.2	0	0.0	10	0.5	12	0.6	25	0.9	25	1.5	25	1.2	25	1.3	TBD	TBD	1356	21.2
INSTALLATION KITS NONRECURRING								2.0		0.9						1.9								4.8
EQUIPMENT																								0.0
EQUIPMENT NONRECURRING																								0.0
ENGINEERING CHANGE ORDERS																								0.0
DATA																								0.0
TRAINING EQUIPMENT																								0.0
SUPPORT EQUIPMENT																								0.0
OTHER																								0.0
OTHER																								0.0
OTHER																								0.0
INTERIM CONTRACTOR SUPPORT																								0.0
INSTALL COST	547	1.6	300	1.0	330	1.9	35	1.0	0	0.0	32	0.7	12	0.3	25	0.5	25	0.5	10	0.2	40	1.0	1356	8.7
TOTAL PROCUREMENT		14.0		2.6		3.1		3.0		1.4		1.3		1.2		3.9		1.7		1.5		1.0		34.7

P3A (Continued) **INDIVIDUAL MODIFICATION (Continued)**

MODELS OF SYSTEMS AFFECTED: GFCS MK 86 MODIFICATION TITLE: MK86; Gun Fire Control Equipment ORDALTs

INSTALLATION INFORMATION: **ALTERATION INSTALLATION TEAM (AIT)**
METHOD OF IMPLEMENTATION:
ADMINISTRATIVE LEADTIME: PRODUCTION LEADTIME:
CONTRACT DATES: FY 1997: N/A FY 1998: N/A FY 1999: N/A
DELIVERY DATE: FY 1997: N/A FY 1998: N/A FY 1999: N/A

($ in Millions)

Cost:	Prior Years		FY 1995		FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		To Complete		Total	
	Qty	**$**	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
PRIOR YEARS	**547**	**1.6**	**300**	**1.0**	283	0.8																	1130	3.4
FY 1995 EQUIPMENT					47	1.1	7	0.1	0	0.0													54	1.2
FY 1996 EQUIPMENT							28	0.9	0	0.0	22	0.4											50	1.3
FY 1997 EQUIPMENT																							0	0.0
FY 1998 EQUIPMENT											10	0.3											10	0.3
FY 1999 EQUIPMENT													12	0.3									12	0.3
FY 2000 EQUIPMENT															25	0.5							25	0.5
FY 2001 EQUIPMENT																	25	0.5					25	0.5
FY 2002 EQUIPMENT																			10	0.2	15	0.4	25	0.6
FY 2003 EQUIPMENT																					25	0.6	25	0.6
TO COMPLETE																								

INSTALLATION SCHEDULE: SHIP AVAILABILITIES

	FY 1996 & Prior	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001				FY 2002				FY 2003				TC	TOTAL
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		
In	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Out	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Note: Prior years quantities above reflect total number of ORDALT kits installed. Beginning in FY95, ORDALTs have been procured, packaged, and installed in sets to lower overall ship unit costs.
- MK86 BASELINE ORDALTS: 13 **(FY94 & Prior)**
- MK86 BLOCK 1 UPGRADE ORDALTS: 4 **(FY95)**
- MK86 BLOCK 2 UPGRADE ORDALTS: 5 **(FY96)**
- MK86 RMA-1 UPGRADE ORDALTS: 3 **(FY97 - FY00)**
- MK86 RMA-2 UPGRADE ORDALTS: 3 **(FY01- FY03)**

CLASSIFICATION: **UNCLASSIFIED**

BUDGET ITEM JUSTIFICATION SHEET P-40	DATE: February 1998
APPROPRIATION/BUDGET ACTIVITY **OTHER PROCUREMENT, NAVY** **BA - 4 ORDNANCE SUPPORT EQUIPMENT**	**P-1 ITEM NOMENCLATURE/LINE ITEM #** MK 92 FIRE CONTROL SYSTEM / 520800
Program Element for Code B Items:	**OTHER RELATED PROGRM ELEMENTS**

	Prior Years	ID Code	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total
QUANTITY				**0**	**12**	**12**	**12**	**12**	**12**	**12**	**12**		**84**
EQUIPMENT COST (In Millions)	N/A	A	**N/A**	**N/A**	**$1.8**	**$0.9**	**$1.0**	**$1.0**	**$1.1**	**$1.1**	**$1.2**	**N/A**	**$8.1**
SPARES COST (In Millions)	N/A	A	**N/A**	**N/A**	**$3.6**	**$3.0**	**$2.5**	**$0.6**	**$0.6**	**$0.6**	**$0.6**	**N/A**	**$11.6**

PROGRAM DESCRIPTION/JUSTIFICATION:

Fleet Support Ordalts - Provides hardware, and related materials to modify Fire Control Systems Mk 92 Mod 6 and Guided Missile Launching System MK 13 installed in 12 CORT/IADT FFG 7 Class Ships. Modifications correct safety, environmental, or obsolescence deficiencies to maintain the readiness of the AAW/ASUW Weapons System mission for self and area defense against hostile air and surface threats, including anti-ship missile threats. Hardware is procured as Ordnance Alterations (ORDALTs). Installation of Ordalts will be accomplished by either Alteration Installation Teams (AIT) or in conjunction with routine repair actions planned in the fiscal years following procurement.

UU51N1 - FMP Install - Funding for installation of ORDALTs into FFG 7 Class ships by AIT.

Spares cost is budget for spare and repair parts. The spare parts are associated with the OPN ORDALT procurements to correct safety, environmental, or obsolescence deficiencies. The repair parts are associated with remanufacturing high cost, long lead, non-naval stock numbered parts for the weapon system.

WEAPONS SYSTEM COST ANALYSIS P-5	Weapon System	DATE: Feb-98

APPROPRIATION/BUDGET ACTIVITY	ID Code	P-1 ITEM NOMENCLATURE/SUBHEAD
Other Procurement, Navy BA-4	A	MK 92 Fire Control System / AA4UU

COST CODE	ELEMENT OF COST	ID Code	TOTAL COST IN THOUSANDS OF DOLLARS											
			FY 1996			FY 1997			FY 1998			FY 1999		
			QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST
	N865													
UU001	FLEET SUPPORT ORDALTS	A	0	0	0	12	153.4	1,841	12	61.9	743	12	70.5	846
UU5IN	FMP INSTALLATION	A			1018						111			115
TOTAL					**1,018**			**1,841**			**858**			**961**

BUDGET PROCUREMENT HISTORY AND PLANNING EXHIBIT (P-5A)	Weapon System	A. DATE
		February 1998

B. APPROPRIATION/BUDGET ACTIVITY	C. P-1 ITEM NOMENCLATURE	SUBHEAD
Other Procurement, Navy	MK 92 FIRE CONTROL SYSTEM	A4UU

Cost Element/ FISCAL YEAR	QTY	UNIT COST (000)	LOCATION OF PCO	RFP ISSUE DATE	CONTRACT METHOD & TYPE	CONTRACTOR AND LOCATION	AWARD DATE	DATE OF FIRST DELIVERY	SPECS AVAILABLE NOW	IF NO WHEN AVAILABLE
FY 1997										
MOD 6 BLK 6	12	153.4	NAVSEA.PEO/SC	10/96	SS/FFP	LOCKHEED/NJ	01/97	07/98	YES	
FY 1998										
MOD 6 BLK 7	12	61.9	NSWC,PHD	10/97	SS/FFP	LOCKHEED/NJ	07/98	01/99	YES	
FY 1999										
MOD 6 BLK 8	12	70.5	NSWC,PHD	10/98	SS/FFP	LOCKHEED/NJ	03/99	09/99	NO	10/98

D. REMARKS

P3A **INDIVIDUAL MODIFICATION**

MODELS OF SYSTEM AFFECTED: Fire Control System Mk 92 Mod 6 TYPE MODIFICATION: MODIFICATION TITLE: UU001 FLEET SUPPORT ORDALTS:

DESCRIPTION/JUSTIFICATION:

FY 97 and future procurements correct safety, environmental or obsolescence deficiencies to maintain combat readiness. FY 96 and prior procurements were RMA/safety ORDALTs for AAW weapon system.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: **ORDALT DEFICIENCY CORRECTION PROGRAM**

	FY 1994 & Prior		FY 1995		FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$
FINANCIAL PLAN (IN MILLIONS)																								
RDT&E		10.5		1.7		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0	0	12.2
PROCUREMENT																								
INSTALLATION KITS		0.0	12	3.8	0	0.0	12	1.8	12	0.9	12	1.0	12	1.0	12	1.1	12	1.1	12	1.2	0	0.0	96	11.9
INSTALLATION KITS NONRECURRING				1.9																				1.9
EQUIPMENT																								0.0
EQUIPMENT NONRECURRING																								0.0
ENGINEERING CHANGE ORDERS																								0.0
DATA																								0.0
TRAINING EQUIPMENT																								0.0
SUPPORT EQUIPMENT																								0.0
OTHER																								0.0
OTHER																								0.0
OTHER																								0.0
INTERIM CONTRACTOR SUPPORT																								0.0
PROCUREMENT COST			12	5.7	0	0.0	12	1.8	12	0.9	12	1.0	12	1.0	12	1.1	12	1.1	12	1.2	0	0.0	96	13.8
INSTALL COST				0.9		1.0		0.0		0.1		0.1		0.1		0.1		0.1		0.1		0.1		2.7
TOTAL PROGRAM COST			12	6.6	0	1.0	12	1.8	12	1.0	12	1.1	12	1.1	12	1.2	12	1.3	12	1.3	0	0.1	96	16.5

P3A (Continued) **INDIVIDUAL MODIFICATION (Continued)**

MODELS OF SYSTEMS AFFECTED: **FIRE CONTROL SYSTEM MK92 MOD 6** MODIFICATION TITLE: FLEET SUPPORT ORDALTS: MK 92 FCS

INSTALLATION INFORMATION: **12 CORT FFGs**
METHOD OF IMPLEMENTATION: **AIT**
ADMINISTRATIVE LEADTIME: 1-12 MONTHS PRODUCTION LEADTIME: 6-18 Months
CONTRACT DATES: FY 1997: **01 97** FY 1998: 07 98 FY 1999: 03 99
DELIVERY DATE: FY 1997: **07 98** FY 1998: 01 99 FY 1999: 09 99

($ in Millions)

Cost:	Prior Years		FY 1995		FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		To Complete		Total	
	Qty	**$**	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
PRIOR YEARS																								
FY 1995 EQUIPMENT					12	1.0																	12	0.7
FY 1996 EQUIPMENT																								0.0
FY 1997 EQUIPMENT									12	0.1													12	0.1
FY 1998 EQUIPMENT											12	0.1											12	0.1
FY 1999 EQUIPMENT													12	0.1									12	0.1
FY 2000 EQUIPMENT															12	0.1							12	0.1
FY 2001 EQUIPMENT																	12	0.1					12	0.1
FY 2002 EQUIPMENT																			12	0.1			12	0.1
FY 2003 EQUIPMENT																					12	0.1	12	0.1
TO COMPLETE																							0	0.0

INSTALLATION SCHEDULE: SHIP AVAILABILITIES

	FY 1996	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001				FY 2002				FY 2003				TC	
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		TOTAL
In	12	0	0	0	0	12	0	0	0	12	0	0	0	12	0	0	0	12	0	0	0	12	0	0	0	12	0	0	0	12	96
Out	12	0	0	0	0	0	4	4	4	0	4	4	4	0	4	4	4	0	4	4	4	0	4	4	4	0	4	4	4	12	96

BUDGET ITEM JUSTIFICATION SHEET P-40												DATE: FEBRUARY 1998
APPROPRIATION/BUDGET ACTIVITY **OTHER PROCUREMENT, NAVY/BA-4:Ordnance Support Equipment**							P-1 ITEM NOMENCLATURE **HARPOON Support Equipment (J4U0)**					
Program Element for Code B Items:							Other Related Program Elements **N/A**					
	Prior Years	ID Code	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total
QUANTITY												
COST (In Millions)	**362.8**	**A**	**$2.8**	**$0.1**	**$0.2**	**$0.0**	**$0.5**	**$0.5**	**$0.0**	**$0.0**	**$0.0**	**$367.0**

The HARPOON Weapon System (HWS) provides a ship and aircraft-launched all-weather, over-the-horizon, anti-ship cruise missile system effective against enemy destroyers, cruisers, surfaced submarines, patrol craft and other enemy shipping (e.g., merchant, surveillance, etc.). The missile uses altitude reference mid-course guidance with an active radar seeker for target acquisition and terminal guidance. The following platforms are configured to provide HARPOON command and control functions to launch the HARPOON missile:

Ship Launch Platforms: DD-963, CGN, FFG-7, CG-47, DDG-51 and DDG-993
Air Launch Platforms: P-3, A-6, F/A-18 and S-3

OPN funds are used for procurement of items peculiar to ship HARPOON Command and Launch Control Systems. Funds for procurement of air launch platforms, new construction and the missile are provided by other appropriations (APN/SCN/WPN). OPN procurement is structured to be compatible with projected Ordnance Alteration (ORDALT) installation schedules and to optimize fleet introduction of HARPOON weapon improvements.

The HWS was granted Approval for Service Use (ASU) per CNO ltr Ser 354H/C 394280 of 19 February 1981. The HARPOON Ship Command and Launch Control System (HSCLCS) AN/SWG-1A(V) was granted Approval for Full Rate Production (AFRP) per ASN(S&L) memo of 12 May 1989

The OPN funding will support a series of ORDALTS to improve HARPOON readiness in the fleet. Computer program improvements to the HSCLCS AN/SWG-1A(V) will correct deficiencies identified in trouble reports, incorporate operational capabilities recommended by the fleet and further enhance operational safety and reliability and provide for HARPOON Block II capabilities.

Funding in FY 1997 and FY 1998 provide for the installation of Shipboard HSCLCS ORDALT Kits procured in previous fiscal years. Funding in FY 2000 and FY 2001 provide for the procurement and installations of ORDALTS to introduce the HARPOON Block II Weapon System capabilities to the surface Navy. These Shipboard ORDALTS will be installed as part of the Fleet Modernization Program (FMP).

WEAPONS SYSTEM COST ANALYSIS **P-5**	Weapon System		DATE: **FEBRUARY 1998**
APPROPRIATION/BUDGET ACTIVITY **Other Procurement, Navy** **BA-4: Ordnance Support Equipment**	ID Code	P-1 ITEM NOMENCLATURE/SUBHEAD **HARPOON Support Equipment (J4U0)**	

TOTAL COST IN THOUSANDS OF DOLLARS

COST CODE	ELEMENT OF COST	ID Code	Prior Years	FY 1996			FY 1997			FY 1998			FY 1999		
			Total Cost	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost
U0004	ORDALTS														
	HSCLCS-1A Computer Program Upgrade	A	101,988			2,448			0			0			0
	ORDALT Kits		(57,449)	58	1.897	(110)									
	Object Oriented Analysis (OOA) and Design (OOD) and Software Coding and Testing		(27,950)			(1,700)									
	Production Support		(16,589)			(638)									
U0910	Installation of Equipment (FMP)		3,936			376			96			238			0
	Various 1/		256,928												
	1/ The amount identified against this cost element reflects total prior year funding associated with cost elements no longer financed in FY95 and beyond.														
			362,852			**2,824**			**96**			**238**			**0**

CLASSIFICATION: **UNCLASSIFIED**

P3A **INDIVIDUAL MODIFICATION**

MODELS OF SYSTEM AFFECTED: CGs, CGNs, DDs, DDGs, FFGs TYPE MODIFICATION: OPERATIONAL MODIFICATION TITLE: WEAPON SYSTEM ORDALTS

DESCRIPTION/JUSTIFICATION:

Weapon System ORDALT Kits include Launcher Relay Assembly (LRA) Cable Corrosion, HSCLCS-1A Embedded Trainer (HET), HSCLCS-1A Selective Engagement, HSCLCS-1A Graphic Display Unit/Graphic Data Processor (GDU/GDP) Enhancement, and HARPOON Block II, HSCLCS-1A ORDALTS, HARPOON Guided Missile Simulator (HGMS) and HOTTS Retrofit ORDALTS will enhance fleet capabilities, readiness, correct system deficiencies and further enhance operational safety and reliability.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

	FY 1994 & Prior		FY 1995		FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$
FINANCIAL PLAN (IN MILLIONS)																								
RDT&E																							0	0.0
PROCUREMENT																								
INSTALLATION KITS	971	57.4	42	0.1	58	0.1	0	0.0	0	0.0	0	0.0	50	0.35	50	0.35	0	0.0	0	0.0	0	0.0	1171	58.3
INSTALLATION KITS - UNIT COST		0.059		0.002		0.002		0.000		0.000		0.000		0.007		0.007		0.000		0.000		0.000		
INSTALLATION KITS NONRECURRING		27.0		0.9		1.7		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		29.6
EQUIPMENT																								0.0
EQUIPMENT NONRECURRING																								0.0
ENGINEERING CHANGE ORDERS																								0.0
DATA																								0.0
TRAINING EQUIPMENT																								0.0
SUPPORT EQUIPMENT																								0.0
OTHER PRODUCTION SUPPORT		15.8		0.8		0.6		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		17.2
OTHER																								0.0
OTHER																								0.0
INTERIM CONTRACTOR SUPPORT																								0.0
INSTALL COST		3.0		0.9		0.4		0.1		0.2		0.0		0.15		0.15		0.0		0.0		0.0		4.9
TOTAL PROCUREMENT		103.2		2.7		2.8		0.1		0.2		0.0		0.5		0.5		0.0		0.0		0.0		110.0

CLASSIFICATION: **UNCLASSIFIED**

P3A (Continued) **INDIVIDUAL MODIFICATION (Continued)**

MODELS OF SYSTEMS AFFECTED: **CGs, CGNs, DDs, DDGs, FFGs** MODIFICATION TITLE: WEAPON SYSTEM ORDALTS

INSTALLATION INFORMATION:
METHOD OF IMPLEMENTATION: **Alteration Installation Team (AIT)**
ADMINISTRATIVE LEADTIME: N/A PRODUCTION LEADTIME: N/A Months
CONTRACT DATES: FY 1997: N/A FY 1998: N/A FY 1999: N/A
DELIVERY DATE: FY 1997: N/A FY 1998: N/A FY 1999: N/A

($ in Millions)

Cost:	Prior Years		FY 1995		FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		To Complete		Total	
	Qty	**$**	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
PRIOR YEARS	920	3.0	31	0.9	20	0.4																	971	4.3
FY 1995 EQUIPMENT							42	0.1															42	0.1
FY 1996 EQUIPMENT									58	0.2													58	0.2
FY 1997 EQUIPMENT																								
FY 1998 EQUIPMENT																								
FY 1999 EQUIPMENT																								
FY 2000 EQUIPMENT													50	0.15									50	0.15
FY 2001 EQUIPMENT															50	0.15							50	0.15
FY 2002 EQUIPMENT																								
FY 2003 EQUIPMENT																								
TO COMPLETE																								

INSTALLATION SCHEDULE:

	FY 1996 & Prior	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001				FY 2002				FY 2003				TC	TOTAL
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		
In	971	0	20	10	12	18	20	20	0	0	0	0	0	12	13	12	13	12	13	12	13	0	0	0	0	0	0	0	0	0	1171
Out	971	0	20	10	12	18	20	20	0	0	0	0	0	12	13	12	13	12	13	12	13	0	0	0	0	0	0	0	0	0	1171

The total program quantity of 1,171 units reflects the inventory objective for this item.

CLASSIFICATION: **UNCLASSIFIED**

BUDGET ITEM JUSTIFICATION SHEET P-40	DATE: February 1998
APPROPRIATION/BUDGET ACTIVITY OTHER PROCUREMENT, NAVY (OPN) BA-4 ORDNANCE SUPPORT EQUIPMENT	P-1 ITEM NOMENCLATURE TARTAR SUPPORT EQUIPMENT LI 5233

		FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003
QUANTITY								
COST (In Millions)		$0.0	$0.0	0.0*	$0.0	$0.0	$0.0	$0.0

less than $100K

FY97 and beyond budgeted in the P-1 Engagement Systems Support #147

BUDGET ITEM JUSTIFICATION SHEET P-40	DATE: February 1998
APPROPRIATION/BUDGET ACTIVITY OTHER PROCUREMENT, NAVY (OPN) BA-4 ORDNANCE SUPPORT EQUIPMENT	P-1 ITEM NOMENCLATURE POINT DEFENSE SUPPORT EQUIPMENT LI 5234

	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003
QUANTITY								
COST (In Millions)		$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0

*

FY97 and beyond budgeted in the P-1 NATO Seasparrow #148

BUDGET ITEM JUSTIFICATION SHEET P-40	DATE: February 1998
APPROPRIATION/BUDGET ACTIVITY **OTHER PROCUREMENT, NAVY** **BA-4 ORNANCE SUPPORT EQUIPMENT**	**P-1 ITEM NOMENCLATURE/LINE ITEM #** AIRBORNE ECM/ECCM 5235
Program Element for Code B Items: **N/A**	**OTHER RELATED PROGRM ELEMENTS** **N/A**

	Prior Years	ID Code			FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total
QUANTITY													**0**
EQUIPMENT COST (In Millions)	**N/A**				**$0.3**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**N/A**	**$0.30**
SPARES COST (In Millions)	**N/A**				**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**N/A**	**$0.00**

PROGRAM DESCRIPTION/JUSTIFICATION:

The Surface Navy uses special electronic attack (EA) support equipment to simulate observed, projected and technologically feasible airborne EA threat environments. This EA equipment provides a family of EA waveform generators, special antennas, microwave components and exciter modules. These assets are used in various aircraft, land-based and target configurations as necessary to stress the electronic protection (EP) designs of all ship air defense systems. These tests are necessary to ensure the EA/EP readiness of ship air defense systems at the time of deployment.

This line provides for the procurement of the core EA equipment modules which support EA/EP evaluations of all surface Navy air defense systems. There are two continuing cost code items: U1005 and U1006.

U1005/Jammer Equipment Support and U1006/Special Microwave Components are continuing level of effort items. Items typically procured under these cost codes include many small components necessary to sustain various ECM equipment configurations for particular applications and platforms.

WEAPONS SYSTEM COST ANALYSIS P-5			Weapon System	DATE: February 1998
APPROPRIATION/BUDGET ACTIVITY Other Procurement, Navy BA-4 ORDANCE SUPPORT EQUIPMENT		ID Code	P-1 ITEM NOMENCLATURE/SUBHEAD AIRBORNE ECM/ECCM EQUIPMENT (84U1)-5235	

COST CODE	ELEMENT OF COST	ID Code	TOTAL COST IN THOUSANDS OF DOLLARS											
						FY 1997			FY 1998			FY 1999		
			QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST
	SPONSOR N-64													
U1005	JAMMER EQUIPMENT SUPPORT	A					$185	$185		$0	$0		$0	$0
U1006	SPECIAL MICROWAVE COMPONENTS	A					$150	$150		$0	$0		$0	$0
TOTAL					**$0**			**$335**			**$0**			**$0**

BUDGET ITEM JUSTIFICATION SHEET P-40	DATE: February 1998
APPROPRIATION/BUDGET ACTIVITY **OTHER PROCUREMENT, NAVY** **BA-4 SUPPORT EQUIPMENT**	P-1 ITEM NOMENCLATURE/LINE ITEM # ***ENGAGEMENT SYSTEMS SUPPORT/523600***
Program Element for Code B Items:	OTHER RELATED PROGRM ELEMENTS

	Prior Years	ID Code	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total
QUANTITY	N/A	A	N/A									**N/A**	**0**
EQUIPMENT COST (In Millions)	N/A	A	N/A		**13.0**	**3.3**	**0.3**	**1.3**	**1.2**	**1.3**	**1.3**	**N/A**	**21.7**
SPARES COST (In Millions)	N/A	A	N/A		**0.2**	**0.7**	**0.03**	**0**	**0**	**0**	**0**	**N/A**	**1**

PROGRAM DESCRIPTION/JUSTIFICATION:

ITEM DESCRIPTION/JUSTIFICATION: The AREA AAW DEFENSE ENGAGEMENT SYSTEM PROGRAM provides for computer improvements and ordnance alteration material to ENGAGEMENT Missile Systems currently installed in ten (10) operational ships. The computer programs and ordnance alterations are needed to improve systems performance, to improve operational capability and to replace low reliability and obsolete components. The ENGAGEMENT SYSTEMS program supports the following areas:

1. RM&A modifications of CGN 36 Class Ship Weapon Systems to provide capability to fire the SM-2 Missiles.
2. Computer Program and Documentation.
3. Modifications to downlink system for enhanced ECM performance.
4. Modification to Radar Environment Simulation System (ERESS).
5. Modification of CGN 36 Class Ship Weapon Systems to provide new missile improvement capabilities.
6. Installation of equipment required for fleet modernization.
7. Modify MK 26 GMLS to improve Reliability, Maintainability, and Availability (RM&A).

UJ001

The SM-2 modification provides changes to the ENGAGEMENT SYSTEMS Missile Fire Control System (MFCS) on CGN 36 ship Class and GFE trainers to upgrade the AAW capability to utilize the SM 2 Missile. This ORDALT group consists of improvements to correct reliability, improve equipment safety, shock hardening, and correct installation and performance anomalies revealed during Fleet Operational Testing and Evaluation. The ORDALTs are usually minor in scope and are emergent, requiring corrective action to resolve fleet reported problems. Various ordalts are required to fully implement SM-2 capabilities and correct existing problems.

UJ034

MK 26 MIDLIFE UPGRADE: Currently, MK 26 Guided Missile Launching System (GMLS) ranks as one of the most troubled systems in the fleet. Due to obsolete parts and less than optimum design of major hydro-mechanical components, Reliability, Maintainability and Availability (RM&A) of MK 26 GMLS has been degrading, thus decreasing system availability and leading to eventual shut down of AAW capability in CG 47 Class ships. MK 26 Midlife Upgrade replaces the existing control system with a microprocessor-based control system eliminating the need for obsolete parts. Major items such as transmissions and controls will be replaced to fix many of the launching system's mechanical problems. These ORDALTS will increase availability of MK 26 GMLS while reducing excessive field service and overhaul cost.

BUDGET ITEM JUSTIFICATION SHEET P-40 CONTINUATION	DATE: February 1998
APPROPRIATION/BUDGET ACTIVITY OTHER PROCUREMENT, NAVY BA-4 SUPPORT EQUIPMENT	P-1 ITEM NOMENCLATURE/LINE ITEM # *ENGAGEMENT SYSTEMS SUPPORT/523600*

UJ035

COMPUTER PROGRAMS AND DOCUMENTATION: This line provides for the Computer Programs and Documentation associated with the changes and the installation and checkout of changes to the MFCS, AN/SYR-1, WDS MK 14, GMLS, CDS, CFCS, Detection Systems, Inertial Navigation System and all other interface changes to the Engagement Subsystem. These changes are those which result after the R&D effort delivered the baseline products to the first ship of the class. These changes are sea, midlife improvements, fleet utilization, differences in hull configurations, such as four MFCSs vice two MFCSs and GMLS MK 13 vice GMLS MK 26. Computer programs and documentation updates require extensive effort in the areas of Performance Definition, Design Definition, Implementation, Test, and Life Cycle Support. This effort requires updating to reflect these modifications to Performance specifications, Design specifications, Interface Design Specifications, Simulations/Support tools, Operators Manuals and all associated training materials. Two computer program deliveries are reflected in this budget, which equate to short term and long term reliability improvements.

UJ5IN

INSTALLATION: Funding is for the installation of equipment, including Fleet Modernization Program installations.

WEAPONS SYSTEM COST ANALYSIS P-5			Weapon System	DATE: February 1998
APPROPRIATION/BUDGET ACTIVITY Other Procurement, Navy BA-4 SUPPORT EQUIPMENT		ID Code	P-1 ITEM NOMENCLATURE/SUBHEAD ENGAGEMENT SYSTEMS SUPPORT/523600 84UJ	

COST CODE	ELEMENT OF COST	ID Code	TOTAL COST IN THOUSANDS OF DOLLARS											
						FY 1997			FY 1998			FY 1999		
			QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST
	N86													
UJ001	RM&ORDALTS							1,441			718			
UJ034	MK 26 MID-LIFE UPGRADE					4	2,057	8,230			0			0
UJ035	COMPUTER PROG & DOC							1,613			922			307
UJ5IN	INSTALLATION OF EQUIPMENT (FMP)							1,728			714			0
TOTAL								**12,982**			**3,330**			**307**

CLASSIFICATION: **UNCLASSIFIED**

BUDGET PROCUREMENT HISTORY AND PLANNING EXHIBIT (P-5A)	Weapon System	A. DATE February 1998
B. APPROPRIATION/BUDGET ACTIVITY Other Procurement, Navy BA-4 SUPPORT EQUIPMENT	C. P-1 ITEM NOMENCLATURE ENGAGEMENT SYSTEMS SUPPORT/523600	SUBHEAD 84UJ

Cost Element/ FISCAL YEAR	QTY	UNIT COST (000)	LOCATION OF PCO	RFP ISSUE DATE	CONTRACT METHOD & TYPE	CONTRACTOR AND LOCATION	AWARD DATE	DATE OF FIRST DELIVERY	SPECS AVAILABLE NOW	IF NO WHEN AVAILABLE
UJ034										
FY 97	4	2057	Minneapolis, MN		SS/FP	UNITED DEFENSE Minneapolis, MN	3/97	1/98	YES	

D. REMARKS

* UJO34 - Does not include non-recurring costs.

CLASSIFICATION: **UNCLASSIFIED**

P3A **INDIVIDUAL MODIFICATION**

MODELS OF SYSTEM AFFECTED: MK 26 GMLS Midlife TYPE MODIFICATION: MODIFICATION TITLE: ENGAGEMENT SYSTEM 523600/ MK 26 GMLS MIDLIFE

DESCRIPTION/JUSTIFICATION:

OBSOLETE PARTS REPLACEMENT GC47 CLASS

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

	FY 1994 & Prior		FY 1995		FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$
FINANCIAL PLAN (IN MILLIONS)																								
RDT&E																								
PROCUREMENT																								
INSTALLATION KITS																								
INSTALLATION KITS NONRECURRING																								
EQUIPMENT					7	11.3	4	7.1															11	18.4
EQUIPMENT NONRECURRING						2.9		1.1																4.0
ENGINEERING CHANGE ORDERS																								
DATA																								
TRAINING EQUIPMENT																								
SUPPORT EQUIPMENT																								
OTHER																								
OTHER																								
OTHER																								
INTERIM CONTRACTOR SUPPORT																								
INSTALL COST						4.7		1.7		1.7														8.1
TOTAL PROCUREMENT					7	18.9	4	9.9		1.7													11	30.5

P3A (Continued) **INDIVIDUAL MODIFICATION (Continued)**

MODELS OF SYSTEMS AFFECTED: **MK 26 GMLS MIDLIFE** MODIFICATION TITLE: ENGAGEMENT SYSTEMS 523600/MK 26 GMLS MIDLIFE

INSTALLATION INFORMATION:
METHOD OF IMPLEMENTATION: **AIT**
ADMINISTRATIVE LEADTIME: 6 Months PRODUCTION LEADTIME: 13 Months
CONTRACT DATES: FY 1997: **3/97** FY 1998: FY 1999:
DELIVERY DATE: FY 1997: **1/98** FY 1998: FY 1999:

($ in Millions)

Cost:	Prior Years		FY 1995		FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		To Complete		Total	
	Qty	**$**	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
PRIOR YEARS																								
FY 1995 EQUIPMENT																								
FY 1996 EQUIPMENT							7	4.7															10	6.4
FY 1997 EQUIPMENT									4	1.7													4	1.7
FY 1998 EQUIPMENT																								
FY 1999 EQUIPMENT																								
FY 2000 EQUIPMENT																								
FY 2001 EQUIPMENT																								
FY 2002 EQUIPMENT																								
FY 2003 EQUIPMENT																								
TO COMPLETE																								

INSTALLATION SCHEDULE: SHIP AVAILABILITIES

	FY 1996 & Prior	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001				FY 2002				FY 2003				TC	TOTAL
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		
In	6	0	7	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17
Out	6	0	0	0	7	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17

CLASSIFICATION: **UNCLASSIFIED**

P3A **INDIVIDUAL MODIFICATION**

MODELS OF SYSTEM AFFECTED: MK 74 DDG 993 & CGN 36 CLASS TYPE MODIFICATION: MODIFICATION TITLE: ENGAGEMENT SYSTEM 523600/ RM&A ORDALTS

DESCRIPTION/JUSTIFICATION:

UPGRADE ANTI-AIR WAREFARE CAPABILITY TO UTILIZE SM-2 MISSILE

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

	FY 1994 & Prior		FY 1995		FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$
FINANCIAL PLAN (IN MILLIONS)																								
RDT&E																								
PROCUREMENT																								
INSTALLATION KITS																								
INSTALLATION KITS NONRECURRING																								
EQUIPMENT					VAR	2.2	VAR	1.1	VAR	0.6	VAR	0.5											VAR	4.4
EQUIPMENT NONRECURRING						0.4		0.4		0.7														1.5
ENGINEERING CHANGE ORDERS																								
DATA																								
TRAINING EQUIPMENT																								
SUPPORT EQUIPMENT																								
OTHER																								
OTHER																								
OTHER																								
INTERIM CONTRACTOR SUPPORT																								
INSTALL COST								1.6		0.4		0.4												2.4
TOTAL PROCUREMENT					VAR	2.6	VAR	3.1	VAR	1.7	VAR	0.9											VAR	8.3

P3A (Continued) **INDIVIDUAL MODIFICATION (Continued)**

MODELS OF SYSTEMS AFFECTED: **MK 74 DDG 993 & CGN 36 CLASS** MODIFICATION TITLE: ENGAGEMENT SYSTEMS 523600/RM&A ORDALTS

INSTALLATION INFORMATION:
METHOD OF IMPLEMENTATION: **AIT**
ADMINISTRATIVE LEADTIME: 6 Months PRODUCTION LEADTIME: 13 Months
CONTRACT DATES: FY 1997: FY 1998: FY 1999:
DELIVERY DATE: FY 1997: FY 1998: FY 1999:

($ in Millions)

Cost:	Prior Years		FY 1995		FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		To Complete		Total	
	Qty	**$**	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
PRIOR YEARS																								
FY 1995 EQUIPMENT																								
FY 1996 EQUIPMENT							VAR	1.6															VAR	1.6
FY 1997 EQUIPMENT									VAR	0.4													VAR	0.4
FY 1998 EQUIPMENT											VAR	0.4											VAR	0.4
FY 1999 EQUIPMENT																								
FY 2000 EQUIPMENT																								
FY 2001 EQUIPMENT																								
FY 2002 EQUIPMENT																								
FY 2003 EQUIPMENT																								
TO COMPLETE																								

INSTALLATION SCHEDULE: SHIP AVAILABILITIES

	FY 1996	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001				FY 2002				FY 2003				TC	
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		TOTAL
In	6	0	7	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17
Out	6	0	0	0	7	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17

* Numerous ORDALTS which effect various types of equipment.

BUDGET ITEM JUSTIFICATION SHEET P-40	DATE: February 1998
APPROPRIATION/BUDGET ACTIVITY **OTHER PROCUREMENT, NAVY / BA 4: Ordnance Support Equipment**	P-1 ITEM NOMENCLATURE/LINE ITEM # **NATO SEASPARROW / 523700**
Program Element for Code B Items: **N/A**	OTHER RELATED PROGRM ELEMENTS

	Prior Years	ID Code	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total
QUANTITY													0
EQUIPMENT COST (In Millions)					$4.6	$12.5	$5.2	$5.8	$5.7	$5.9	$6.1		$45.8
SPARES COST (In Millions)					$0.4	$0.6	$0.4	$0.8	$1.3	$1.2	$0.4		$5.9

PROGRAM DESCRIPTION/JUSTIFICATION:

NATO SEASPARROW Surface Missile System (NSSMS) NATO SEASPARROW is a Self Defense AAW Shipboard Missile System.
Primary operations consist of:

- Acquiring targets from external or internal designations
- Establishing track data for Engageability Determination and Launcher/Missile Control
- Target Illumination for Missile Guidance
- Missile Firing
- Kill/Survive Assessment

Provides fully automatic operation with provisions for Operator Intervention or Override from the time of Target Designation to Missile Away. The NSSMS consists of a Fire Control System comprised of Directors; a General Purpose Digital Computer; Signal Data Converters; Transmitter Group; Operating Consoles, and an 8 Cell Launcher, which employs the surface launch variant of the Sparrow Missile. The Surface Launch Version (RIM-7) uses a Radar Homing Guidance System, with Target Illumination provided by the shipboard MK91 System Radar Directors.

When NSSMS is combined with the MK23 Target Acquisition System (TAS), they become the AN/SWY-1 Self Defense Surface Missile System (SDSMS) for the following U.S. Navy Ships: AOE/AORs, CV/CVNs, DD963s, LHDs, Self Defense Test Ship, and shore based facilities.

The NSSMS is a NATO Cooperative Project with the participating governments of Australia, Belgium, Canada, Denmark, Germany, Greece, Italy, Norway, The Netherlands, Portugal, Spain, Turkiye and the United States. The NSSMS and associated systems of the Cooperative Project were developed, produced and are supported under an International Memorandum of Understanding (MOU).

The NATO Cooperative Project is currently in the Engineering, Manufacturing and Development Phase (EMD) for the Evolved SEASPARROW Missile (ESSM) and associated NSSMS/MK91 Fire Control modifications.

[1] This Program P-1 Line was separated for the FY96 and out years from the P-1 Item Nomenclature Point Defense Support Equipment.

BUDGET ITEM JUSTIFICATION SHEET P-40 CONTINUATION	DATE: FEBRUARY 1998
APPROPRIATION/BUDGET ACTIVITY OTHER PROCUREMENT, NAVY / BA 4: Ordnance Support Equipment	P-1 ITEM NOMENCLATURE/LINE ITEM # NATO SEASPARROW / 523700

The FY98 and prior year provides funding for minor engineering changes/ordnance alterations (ORDALTs) (software/hardware) procured in response to the fleet concerns of the combat readiness (including safety and reliability) of the system. End of system production has mandated reuse of systems as well as ensuring systems in the Fleet have required changes for reliability and performance improvements.

The ORDALTs procured under this line in FY98 will be installed in NSSMS on AOE/AORs, CV/CVNs, DD 963 and LHD Class ships. Installation will be accomplished in a regular overhaul, during restricted availability or by a Tiger Team. Naval Surface Warfare Center, Port Hueneme Division functions as the In-Service Engineering Agent (ISEA) and support agent. FY98 completes the Production Improvement non-recurring effort for the transmitter.

The FY98 Congressional Add-on funding was provided for the Charged Couple Device (CCD) ORDALT effort to upgrade the Low Light Level Television (LLLTV) Units.

The FY99 and out year funding provides for the Solid State transmitter upgrade. This upgrade will replace the current Klystron Vacuum Tubes resulting in lower cost of ownership, improved reliability, reduced system downtime, lower associated maintenance for parts replacement.

CLASSIFICATION: **UNCLASSIFIED**

WEAPONS SYSTEM COST ANALYSIS P-5	Weapon System	DATE: February 1998

APPROPRIATION/BUDGET ACTIVITY	ID Code	P-1 ITEM NOMENCLATURE/SUBHEAD
Other Procurement, Navy / BA 4: Ordnance Support Equipment	A	NATO SEASPARROW / 14US

TOTAL COST IN THOUSANDS OF DOLLARS

COST CODE	ELEMENT OF COST	ID Code	FY 1997 [1]			FY 1998			FY 1999 [2]		
			QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST
US003	NSSMS IMPROVEMENTS							3,678			11,355			4,513
US004	ESSM/MK91 SYSTEM MODIFICATION													
US900	NSSMS - CSS							312			375			350
US5IN	EQUIPMENT INSTALLATION (FMP)							624			781			293
TOTAL								4,614			12,511			5,156

CLASSIFICATION: **UNCLASSIFIED**

BUDGET PROCUREMENT HISTORY AND PLANNING EXHIBIT (P-5A)	Weapon System	A. DATE
		February 1998

B. APPROPRIATION/BUDGET ACTIVITY	C. P-1 ITEM NOMENCLATURE	SUBHEAD
Other Procurement, Navy / BA 4: Ordnance Support Equipment	NATO SEASPARROW	14US

Cost Element/ FISCAL YEAR	QTY	UNIT COST (000)	LOCATION OF PCO	RFP ISSUE DATE	CONTRACT METHOD & TYPE	CONTRACTOR AND LOCATION	AWARD DATE	DATE OF FIRST DELIVERY	SPECS AVAILABLE NOW	IF NO WHEN AVAILABLE
US 003/ FY98										
CCD ORDALT for LLLTV	15	320	NAVSEA	Feb-98	Firm Fixed Price	Ball Aerospace	4/98	10/99	YES	
US 003/ FY99										
Transmitter Upgrade ORDALT	4	627	NAVSEA	Apr-98	Firm Fixed Price	Raytheon Electronic Systems	4/99	11/00	NO	September 1998

D. REMARKS

CLASSIFICATION: **UNCLASSIFIED**

P3A **INDIVIDUAL MODIFICATION**

MODELS OF SYSTEM AFFECTED: NATO SEASPARROW Surface Missile Systems TYPE MODIFICATION: Reliability & Safety MODIFICATION TITLE: Various

DESCRIPTION/JUSTIFICATION:

The ORDALT line provides for engineering changes (software/hardware) procured in response to fleet concerns. The non-recurring costs are associated with the Solid State transmitter upgrade. - Uses modular Solid State PA design; - Replaces the current Klystron Vacuum Tubes resulting in lower cost of ownership, improved reliability, reduced system downtime, lower associated maintenance for parts replacement. Product Improvement (NRE) effo associated with the transmitter upgrade will complete in FY98, transmitter ORDALT production commences in FY99.
FY98 provides for the CCD ORDALT to LLTV to enable effecient oiperation of the LLLTV systems without obsolescence of the CCD.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: **Complete**

	FY 1994 & Prior		FY 1995		FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$
FINANCIAL PLAN (IN MILLIONS)																								
RDT&E																							0	0.0
PROCUREMENT																								
INSTALLATION KITS NONRECURRING																								0.0
EQUIPMENT 1]						2.1		1.9		3.4	4	2.5	6	3.8	6	3.9	6	4.0	6	4.1		Cont		25.7
EQUIPMENT NONRECURRING						3.3		1.8		2.0														7.1
ECPs/ORDALTs 2]										4.8		0.8		0.2		0.2		0.2		0.2				6.4
DATA																								0.0
TRAINING EQUIPMENT																								0.0
SUPPORT EQUIPMENT																								0.0
OTHER - PRODUCTION SUPPORT										1.2		1.2		1.1		1.0		1.2		1.3				7.0
OTHER																								0.0
OTHER																								0.0
INTERIM CONTRACTOR SUPPORT																								0.0
PROCUREMENT COST	0	0		0		5.4		3.7		11.4		4.5		5.1		5.1		5.4		5.6				46.2
INSTALL COST						0.6		0.6		0.8		0.3		0.3		0.2		0.2		0.2				3.2
TOTAL PROGRAM COST	0	0	0	0	0	6.0		4.3		12.2		4.8		5.4		5.3		5.6		5.8				49.4

1] Includes hardware & production support costs, excludes CSS.

2] FY98 Congressional Add-on for LLLTV-CCD ORDALT

P3A (Continued) **INDIVIDUAL MODIFICATION (Continued)**

MODELS OF SYSTEMS AFFECTED: **NATO SEASPARROW Surface Msl Sys** MODIFICATION TITLE: Solid State Transmitter ORDALT

INSTALLATION INFORMATION:
METHOD OF IMPLEMENTATION: **AIT or ROH, SRA, PIA**
ADMINISTRATIVE LEADTIME: 9 Months PRODUCTION LEADTIME: 18 Months

CONTRACT DATES:	FY 1999: **4**	FY 2000: 6	FY 2001: 6	FY 2002: 6
DELIVERY DATE:	FY 1999: **0**	FY 2000: 0	FY 2001: 4	FY 2002: 6
CONTRACT DATES:	FY 2003: **6**	FY 2004: 0	FY 2005: 0	
DELIVERY DATE:	FY 2003: **6**	FY 2004: 6	FY 2005: 6	

($ in Millions)

Cost:	Prior Years		FY 1995		FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		To Complete		Total	
	Qty	**$**	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
PRIOR YEARS																								
FY 1995 EQUIPMENT																								
FY 1996 EQUIPMENT																								
FY 1997 EQUIPMENT																								
FY 1998 EQUIPMENT																								
FY 1999 EQUIPMENT															4	0.12							4	0.12
FY 2000 EQUIPMENT																	6	0.18					6	0.18
FY 2001 EQUIPMENT																			6	0.18			6	0.18
FY 2002 EQUIPMENT																					6	0.18	6	0.18
FY 2003 EQUIPMENT																					6	0.18	6	0.18
TO COMPLETE																								

INSTALLATION SCHEDULE: SHIP AVAILABILITIES

	FY 2000 & Prior	FY 2001				FY 2002				FY 2003				FY 2004				FY 2005				FY 2006					TC	TOTAL
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4			
In	0	0	4	0	0	0	0	2	4	4	0	2	0	0	0	2	4	0	2	0	4	0	0	0	0		0	28
Out	0	0	0	0	4	0	0	0	2	0	4	0	6	0	0	0	0	2	0	2	4	0	0	4	0		0	28

P3A (Continued) **INDIVIDUAL MODIFICATION (Continued)**

MODELS OF SYSTEMS AFFECTED: **NATO SEASPARROW Surface Msl Sys** MODIFICATION TITLE: Various Reliability/Maintainability ORDALTS including CCD for LLLTV

INSTALLATION INFORMATION:
METHOD OF IMPLEMENTATION: **Tiger Team or during ROH or restricted availability**
ADMINISTRATIVE LEADTIME: 6 PRODUCTION LEADTIME: 18 - 24 Months

CONTRACT DATES:	FY 1997: Various	FY 1998: Various	FY 1999: Various	FY 2000: Various
DELIVERY DATE:	FY 1997: Various	FY 1998: Various	FY 1999: Various	FY 2000: Various
CONTRACT DATES:	FY 2001: Various	FY 2002:	FY 2003:	
DELIVERY DATE:	FY 2001: Various	FY 2002: Various	FY 2003: Various	

($ in Millions)

Cost:	Prior Years		FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
PRIOR YEARS			**		**	0.624	**	0.781	**	0.237	1	0.203										2.5
FY 1997 EQUIPMENT									**	0.056											**	0.056
FY 1998 EQUIPMENT											**	0.088									**	0.088
FY 1999 EQUIPMENT													**	0.073							**	0.073
FY 2000 EQUIPMENT															**	0.061					**	0.061
FY 2001 EQUIPMENT																	**	0.061			**	0.061
FY 2002 EQUIPMENT																						
FY 2003 EQUIPMENT																						
TO COMPLETE																						

** Various ORDALTs/Ships

INSTALLATION SCHEDULE: SHIP AVAILABILITIES

	FY 2000 & Prior	FY 2001 1 2 3 4	FY 2003 1 2 3 4	FY 2004 1 2 3 4	FY 2005 1 2 3 4	FY 2006 1 2 3 4		TC	TOTAL
In								0	
Out								0	

BUDGET ITEM JUSTIFICATION SHEET P-40	DATE: FEB 1998
APPROPRIATION/BUDGET ACTIVITY: OTHER PROCUREMENT, NAVY / BA- 4 RAM GMLS	P-1 ITEM NOMENCLATURE/LINE ITEM #: *Rolling Airframe Missile (RAM) 5238*
Program Element for Code B Items:	OTHER RELATED PROGRM ELEMENTS

	Prior Years	ID Code	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total
QUANTITY	N/A	A	N/A	N/A	**5**	**8**	**8**	**5**	**0**	**4**	**6**	**N/A**	**36**
EQUIPMENT COST (In Millions)	N/A	A	N/A	N/A	**$44.7**	**$66.5**	**$59.8**	**$42.9**	**$20.2**	**$44.3**	**$43.6**	**N/A**	**322**
SPARES COST (In Millions)	N/A	A	N/A	N/A	**$0.2**	**$1.7**	**$1.8**	**$1.7**	**$0.5**	**$0.5**	**$0.2**	**N/A**	**7**

PROGRAM DESCRIPTION/JUSTIFICATION:

Rolling Airframe Missile (RAM) - MK-49 Guided Missile Launching System (GMLS)

RAM is a NATO cooperative project with Germany. The RAM production MOU, approved by the U.S. and Germany on 3 August 1987, requires coproduction of the RAM Guided Missile Launching System. In August 1992, General Dynamics (ADSD) was acquired by Hughes Aircraft Company.

The RAM is a lightweight, quick-reaction, high firepower missile system designed to provide antiship missile defense. The MK-31 Guided Missile Weapons System (GMWS) is comprised of a MK-44 Guided Missile Round Pack (GMRP) and the MK-49 GMLS, which holds 21 RAM missiles. The 21-round launcher is compatible with various platforms ranging from large USN amphibious assault ships to S-143 type German patrol boats. This system is designed to counter high density anti-ship, cruise missile raids and provide for ship survivability with accurate terminal guidance, proven lethality and no fire control channel dependence. An ECP for reliability and maintainability improvement to the below-deck equipment began in FY97 and will produce an 11-round trainer launcher.

Full-Scale Engineering Development (FSED) began in 1979. Milestone IIIA Approval for Limited Production (ALP) was granted 27 April 1987, and operational tests were completed in April 1990. Approval for Full Rate Production was granted 6 May 1993. The total RAM Guided Missile Launching System (GMLS) procurement program is 197 launchers (117 OPN including 2 trainers, 37 SCN, and 43 German systems). 90 Launchers (40 U.S. OPN, 7 U.S. SCN and 43 German) were procured in FY 1997 and prior years under joint US/German production contracts. Of the 107 remaining launchers, 31 OPN and 24 SCN launchers are budgeted in the years FY98 through FY03. 46 OPN and 6 SCN units are planned beyond the FYDP.

BUDGET ITEM JUSTIFICATION SHEET P-40 CONTINUATION	DATE: Feb 1998
APPROPRIATION/BUDGET ACTIVITY OTHER PROCUREMENT, NAVY BA-(4): (RAM GMLS)	P-1 ITEM NOMENCLATURE/LINE ITEM # *Rolling Airframe Missile (RAM) 5238*

RAM is installed on or planned for installation on the following ship classes:

CLASS	SHIPS	LAUNCHERS	
LHA (OPN)	5	10	
LSD (OPN)	11	23	(LSD-52 (1 OPN & 1 SCN))
DD 963 (OPN)	12	12	
LHD (OPN)	4	8	
CVN (OPN)	9	18	
CG 52 (OPN)	22	44	
TRAINER (OPN)	2	2	
OPN TOTAL	65	117	
LSD (SCN)	1	1	(LSD-52 (1 OPN & 1 SCN))
LHD (SCN)	3	6	
CVN (SCN)	3	6	
LPD 17 (SCN)	12	24	
SCN TOTAL	19	37	

The RAM GMLS installations are performed during overhauls or regular shipyard availability. The NSWC Port Hueneme provides installation oversight support as the ISEA for the RAM system. RAM will be installed on LHA, LSD, LHD, DD963, CVN, LPD, and CG ship classes.

CLASSIFICATION: **UNCLASSIFIED**

WEAPONS SYSTEM COST ANALYSIS P-5														DATE: Feb 1998
APPROPRIATION/BUDGET ACTIVITY Other Procurement, Navy BA-(4): (RAM GMLS)						ID Code	P-1 ITEM NOMENCLATURE/SUBHEAD Rolling Airframe Missile (RAM) 5238 14UR							
COST CODE	ELEMENT OF COST	ID Code	TOTAL COST IN THOUSANDS OF DOLLARS											
						FY 1997			FY 1998			FY 1999		
			QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST
	SPONSOR: N86													
UR006	RAM MK-49 GMLS	A				5	4,700	23,498	7	4,499	31,492	8	4,589	36,712
UR006	RAM 11-ROUND GMLS	A							1	5,401	5,401			0
UR006	RAM ECPs	A						6,009			9,731			2,434
UR006	RAM GMLS ORDALTS	A						0	4	700	2,800	3	725	2,175
UR777	RAM ENGINEER SERVICES (Contractor)	A						1,366			4,698			3,797
UR007	RAM GMLS PRODUCTION SUPPORT	A						3,288			1,829			4,309
UR900	RAM - CSS	A						413			558			998
UR006	RAM GMLS ORDALT INSTALL (NON-FMP)	A									96			300
UR5IN	RAM GMLS INSTALL (FMP)	A						10,082			9,912			9,035
	TOTAL PROGRAM							**44,656**			**66,517**			**59,760**

CLASSIFICATION: **UNCLASSIFIED**

BUDGET PROCUREMENT HISTORY AND PLANNING EXHIBIT (P-5A)	Weapon System	A. DATE
		FEB 1998

B. APPROPRIATION/BUDGET ACTIVITY	C. P-1 ITEM NOMENCLATURE	SUBHEAD
Other Procurement, Navy BA-(4): (RAM GMLS)	Rolling Airframe Missile (RAM) 5238	14UR

Cost Element/ FISCAL YEAR	QTY	UNIT COST (000)	LOCATION OF PCO	RFP ISSUE DATE	CONTRACT METHOD & TYPE	CONTRACTOR AND LOCATION	AWARD DATE	DATE OF FIRST DELIVERY	SPECS AVAILABLE NOW	IF NO WHEN AVAILABLE
UR006						Tucson, Arizona				
FISCAL YEAR (97)										
RAM GMLS (MK-49)	5	4700	NAVSEA		OPTION	Hughes Missile System	11/96	8/98	YES	
UR006						Tucson, Arizona				
FISCAL YEAR (98)										
RAM GMLS (MK-49)	7	4,499	NAVSEA	4/97	SS/FP	Hughes Missile System	11/97	8/99	YES	
RAM 11-Round	1	5401	NAVSEA	6/97	SS/CPIF	Tucson, Arizona	2/98	11/99	NO	6/99
UR006										
FISCAL YEAR (99)										
RAM GMLS (MK-49)	7	4589	NAVSEA	4/98	SS/FP	Raytheon Missile Systems, Tucson, AZ	12/98	9/00	YES	

D. REMARKS

CLASSIFICATION: **UNCLASSIFIED**

P3A **INDIVIDUAL MODIFICATION**

MODELS OF SYSTEM AFFECTED: ROLLING AIRFRAME MISSILE (RAM) TYPE MODIFICATION: MK-49 GMLS MODIFICATION TITLE:

DESCRIPTION/JUSTIFICATION:

The Rolling Airframe Missile is a lightweight, quick-reaction, high firepower missile system designed to provide antiship missile defense. The system (MK-31 GMWS), comprises an MK-44 Guided Missile Round Pack (GMRP) and the MK-49 Guided Missile Launching System (GMLS), which holds 21 RAM missiles. The 21-round launcher is compatible with various platforms, ranging from large USN amphibious assault ships to S-143-type German patrol boats. This system is designed to counter high density anti-ship, cruise missile raids and provide for ship survivability with accurate terminal guidance, proven lethality and no fire control channel dependence.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: **Full-Scale Engineering Development (FSED) began in 1979. Milestone IIIA Approval for Limited Production (ALP) was granted 27 April 1987 and Operational Tests were completed in April 1990. Approval for Rate Production was granted 6 May 1993.**

	FY 1994 & Prior		FY 1995		FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$
FINANCIAL PLAN (IN MILLIONS)																								
RDT&E																								
PROCUREMENT																								
INSTALLATION KITS																								
INSTALLATION KITS NONRECURRING																								
EQUIPMENT	21	113.2	9	41.2	6	27.3	5	23.5	8	36.9	8	36.7	5	24.9	0	0.0	4	21.6	6	31.7	45	225.9	117	583.0
EQUIPMENT NONRECURRING																								
ENGINEERING CHANGE ORDERS		6.7		1.9		0.3		6.0		9.7		2.4		1.7		0.7		1.8		1.4		0.0		32.7
DATA																								
TRAINING EQUIPMENT																								
SUPPORT EQUIPMENT																								
ENGINEERING SERVICES (Contractor)		2.5		2.8		2.0		1.4		4.7		3.8		1.1		1.2		1.3		1.3		6.4		29.8
PRODUCTION SUPPORT		11.4		4.2		3.2		3.3		1.8		4.3		4.0		4.3		4.3		4.3		17.2		62.3
OTHER																								
INTERIM CONTRACTOR SUPPORT		2.4		0.6		0.8		0.4		0.6		1.0		1.0		1.0		1.0		1.0		4.1		13.8
PROCUREMENT COST		136.2		50.7		33.6		35.9		53.7		48.3		32.7		7.2		30.0		39.7		253.6		721.6
INSTALL COST	9	6.6	1	2.8	10	11.0	9	10.1	7	9.9	5	9.0	8	8.5	8	12.9	5	8.1	0	0.1	55	82.5	117	160.1
TOTAL PROCUREMENT		142.8		53.5		44.6		44.7		63.6		57.3		41.2		20.0		38.1		39.8		336.1		881.7

CLASSIFICATION: **UNCLASSIFIED**

P3A (Continued) **INDIVIDUAL MODIFICATION (Continued)**

MODELS OF SYSTEMS AFFECTED: **ROLLING AIRFRAME MISSILE (RAM)** MODIFICATION TITLE: MK-49 GMLS

INSTALLATION INFORMATION:
METHOD OF IMPLEMENTATION: **SHIPYARD**
ADMINISTRATIVE LEADTIME: 7 Months PRODUCTION LEADTIME: 21 Months
CONTRACT DATES: FY 1997: **DEC 96** FY 1998: DEC 97 FY 1999: DEC 98
DELIVERY DATE: FY 1997: **SEP 98** FY 1998: SEP 99 FY 1999: SEP 00

($ in Millions)

Cost:	Prior Years		FY 1995		FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
PRIOR YEARS	**9**	6.6	1	2.7	10	11.0	1	1.0															21	21.3
FY 1995 EQUIPMENT							8	7.7	1	2.3													9	10.0
FY 1996 EQUIPMENT									6	7.6													6	7.6
FY 1997 EQUIPMENT											5	9.0											5	9.0
FY 1998 EQUIPMENT													8	8.5									8	8.5
FY 1999 EQUIPMENT															8	12.9							8	12.9
FY 2000 EQUIPMENT																	5	8.1					5	8.1
FY 2001 EQUIPMENT																			0	0.1			0	0.1
FY 2002 EQUIPMENT																					4	6.0	4	6
FY 2003 EQUIPMENT																					6	9.0	6	9.0
TO COMPLETE																					46	69.0	46	69.0

INSTALLATION SCHEDULE: SHIP AVAILABILITIES

	FY 1996	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001				FY 2002				FY 2003				TC	
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		TOTAL
In	20	1	2	6	0	3	0	2	2	0	4	1	0	2	2	2	2	1	5	1	1	0	2	1	2	0	0	0	0	55	117
Out	20	0	1	2	6	0	3	0	2	2	0	4	1	0	2	2	2	2	1	5	1	1	0	2	1	2	0	0	0	55	117

CLASSIFICATION: **UNCLASSIFIED**

P3A **INDIVIDUAL MODIFICATION**

MODELS OF SYSTEM AFFECTED: ROLLING AIRFRAME MISSILE (RAM) TYPE MODIFICATION: MK-49 GMLS MODIFICATION TITLE: ORDALTS

DESCRIPTION/JUSTIFICATION:

The Rolling Airframe Missile is a lightweight, quick-reaction, high firepower missile system designed to provide antiship missile defense. The system (MK-31 GMWS), comprises an MK-44 Guided Missile Round Pack (GMRP) and the MK-49 Guided Missile Launching System (GMLS), which holds 21 RAM missiles. The 21-round launcher is compatible with various platforms, ranging from large USN amphibious assault ships to S-143-type German patrol boats. This system is designed to counter high density anti-ship, cruise missile raids and provide for ship survivability with accurate terminal guidance, proven lethality and no fire control channel dependence. This ordalt enables the GMLS to launch either the Block 0 or the Block 1 IRMU Missile.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: **Full-Scale Engineering Development (FSED) began in 1979. Milestone IIIA Approval for Limited Production (ALP) was granted 27 April 1987 and Operational Tests were completed in April 1990. Approval for Rate Production was granted 6 May 1993.**

	FY 1994 & Prior		FY 1995		FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$
FINANCIAL PLAN (IN MILLIONS)																								
RDT&E																								
PROCUREMENT																								
INSTALLATION KITS																								
INSTALLATION KITS NONRECURRING																								
EQUIPMENT					2	1.4	0	0.0	4	2.8	3	2.2	2	1.5	0	0.0	8	6.2	4	3.2	38	30.3	61	46.1
EQUIPMENT NONRECURRING																								
ENGINEERING CHANGE ORDERS																								
DATA																								
TRAINING EQUIPMENT																								
SUPPORT EQUIPMENT																								
ENGINEERING SERVICES (Contractor)																								0.0
PRODUCTION SUPPORT																								0.0
OTHER																								0.0
INTERIM CONTRACTOR SUPPORT																								0.0
PROCUREMENT COST		0.0		0.0	2	1.4	0	0.0	4	2.8	3	2.2	2	1.5	0	0.0	8	6.2	4	3.2	38	30.3	61	46.1
INSTALL COST									2	0.1	4	0.3	3	0.2	2	0.2	0	0.0	8	0.7	42	3.8	61	5.3
TOTAL PROGRAM		0.0		0.0		1.4		0.0		2.9		2.5		1.7		0.2		6.2		3.9		34.1		52.8

CLASSIFICATION: **UNCLASSIFIED**

P3A (Continued) **INDIVIDUAL MODIFICATION (Continued)**

MODELS OF SYSTEMS AFFECTED: **ROLLING AIRFRAME MISSILE (RAM)** MODIFICATION TITLE: MK-49 GMLS - ORDALTS

INSTALLATION INFORMATION:
METHOD OF IMPLEMENTATION: **SHIPYARD**
ADMINISTRATIVE LEADTIME: 3 Months PRODUCTION LEADTIME: 12 -18 Months
CONTRACT DATES: FY 1997: **DEC 97** FY 1998: DEC 98 FY 1999: DEC 99
DELIVERY DATE: FY 1997: **JUN 99** FY 1998: JUN 00 FY 1999: JUN 01

($ in Millions)

Cost:	Prior Years		FY 1995		FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		To Complete		Total	
	Qty	**$**	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
PRIOR YEARS																							0	0.0
FY 1995 EQUIPMENT																							0	0.0
FY 1996 EQUIPMENT									2	0.1													2	0.1
FY 1997 EQUIPMENT																							0	0.0
FY 1998 EQUIPMENT											4	0.3											4	0.3
FY 1999 EQUIPMENT													3	0.2									3	0.2
FY 2000 EQUIPMENT															2	0.2							2	0.2
FY 2001 EQUIPMENT																	0	0.0					0	0.0
FY 2002 EQUIPMENT																			8	0.7			8	0.7
FY 2003 EQUIPMENT																					4	0.3	4	0.3
TO COMPLETE																					38	3.0	38	3.0

INSTALLATION SCHEDULE: SHIP AVAILABILITIES

	FY 1996 & Prior	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001				FY 2002				FY 2003				TC	TOTAL
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		
In	0	0	0	0	0	0	2	0	0	0	2	1	1	2	1	0	0	0	2	0	0	0	0	0	0	2	2	2	2	42	61
Out	0	0	0	0	0	0	2	0	0	0	2	1	1	2	1	0	0	0	2	0	0	0	0	0	0	2	2	2	2	42	61

BUDGET ITEM JUSTIFICATION SHEET P-40	DATE: February 1998
APPROPRIATION/BUDGET ACTIVITY OTHER PROCUREMENT, NAVY / 4 ORDNANCE SUPPORT EQUIPMENT	P-1 ITEM NOMENCLATURE/LINE ITEM # SHIP SELF DEFENSE SYSTEM (SSDS) MK 1 / 5239
Program Element for Code B Items: 0604755N	OTHER RELATED PROGRM ELEMENTS N/A

	Prior Years	ID Code	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total
QUANTITY	N/A	B			0	2	2	6	5	5	5	N/A	25
EQUIPMENT COST (In Millions)	N/A	B			$18.0	$17.5	$22.9	$57.9	$60.5	$64.2	$63.5	N/A	$304.4
SPARES COST (In Millions)	N/A	B			$0.6	$0.0	$2.2	$3.4	$2.8	$2.8	$1.0	N/A	$12.8

PROGRAM DESCRIPTION/JUSTIFICATION:

SHIP SELF DEFENSE SYSTEM (SSDS) - Funds are requested to procure an evolutionary Ship Self Defense System (SSDS) for non-AEGIS ships. The Ship Self Defense System is a coordinated engineering approach to improve ship self defense utilizing existing and planned defensive systems in Navy ships. The program coordinates the efforts of diverse acquisition programs that are in varying stages of programmatic maturity, most of which have products already in the fleet. A two phase evolutionary acquisition program structure defined in the AN/SYQ-17 Rapid Anti-Ship Missile Integrated Defense System Operational Requirement 240-03-89 identifies the rapid delivery of an automated anti-ship missile defense tactical decision aid for surface combatants, SSDS MK 0 , followed by an evolutionary program to integrate sensors and automate engagement sequences of hardkill and softkill systems. The latter phase is identified as SSDS MK 1.

SSDS MK 0 - Rapid Anti-Ship Missile Integrated Defense System (RAIDS) using ruggedized personal computer workstations and an ETHERNET LAN, provides decision support to weapons systems operators and managers using data from AN/SLQ-32 and CIWS radar. The MK 0 is designated for use on 25 DD 963 Class and FFG 7 Class. The DD 963 systems were budgeted in FY 93 funding for AN/SLQ-32. A DD 963 MK 0 contract was awarded 12 May 1994. The FY 94 Point Defense budget procured MK 0 systems for sixteen FFG 7 Class ships. The FFG 7 SSDS MK 0 contract was awarded 7/95. There are no procurements planned after FY 94. The installation agent for the SSDS MK 0 is NSWC Port Hueneme with installations via Alteration Installation Team (AIT). Sixteen installations were performed in FY 97.

SSDS MK 1 - The Ship Self Defense System MK 1 implements the second phase of an evolutionary acquisition of improved ship self defense capabilities against anti-ship cruise missiles for selected ships by integrating existing and programmed anti-air warfare stand-alone systems and thereby providing an automated quick reaction and multi-target engagement capability emphasizing performance in the littoral environment. Integration will focus on coordinating existing sensor information, providing threat identification and evaluation, assessing defensive readiness, and recommending an optimized defensive tactical response to counter single and multiple anti-ship cruise missile attacks. Subsequent modifications will require replacement of commercial-off-the-shelf (COTS) equipment and optimize the Ship Self Defense System, providing enhanced self defense capabilities while allowing for insertion of advanced technologies during Engineering and Manufacturing Development and Production Deployment Phases. System design emphasizes use of non-developmental items and commercial standards. Development testing started May 1996 with operational testing to be completed in June 1997. Hughes Aircraft Co., San Diego CA, is the system design agent. JHU/APL, Laurel MD, is the technical design agent. SSDS MK1 is planned for installation on LSD 41-52, LHD 1-7, LHA 1-5, LPD 17- 28 and CV/N 63, 65, 67-76. The installation agent for SSDS MK 1 is NSWC Port Hueneme with installations planned via Shipyards and AIT.

WEAPONS SYSTEM COST ANALYSIS P-5				Weapon System			DATE: February 1998					
APPROPRIATION/BUDGET ACTIVITY OTHER PROCUREMENT, NAVY / 4 ORDNANCE SUPPORT EQUIPMENT			ID Code B	P-1 ITEM NOMENCLATURE/SUBHEAD SHIP SELF DEFENSE SYSTEM (SSDS) MK 1 / 14UQ								
COST CODE	ELEMENT OF COST	ID Code	TOTAL COST IN THOUSANDS OF DOLLARS									
						FY 1997			FY 1998			FY 1999		
			QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST
	SPONSOR N86													
	EQUIPMENT													
UQ001	SSDS MK1- (NON -ADD)								(2)		(10,197)	(2)		(10,146)
	LSD	B							2	5,098	10,197	2	5,073	10,146
UQ002	SSDS PRODUCTION SUPPORT							7,316			1,189			3,405
UQ003	SSDS ECP							0			0			850
UQ004	SSDS TRAINING							1,990			146			2,289
UQ005	SSDS COTS REPLACEMENT							0			0			43
UQ007	SSDS FOR SWY - 1/3							0			0			800
UQ009	SSDS CSS							198			75			534
	INSTALL													
UQ775	SSDS MK1 EQUIP. INSTALL (FMP)							7,031			2,723			4,877
UQ6IN	EQUIPMENT INSTALL (NON-FMP)							1,478			3,138			0
TOTAL								18,013			17,468			22,944

BUDGET PROCUREMENT HISTORY AND PLANNING EXHIBIT (P-5A)	Weapon System	A. DATE February 1998

B. APPROPRIATION/BUDGET ACTIVITY OTHER PROCUREMENT, NAVY / 4 ORDNANCE SUPPORT EQUIPMENT	C. P-1 ITEM NOMENCLATURE SHIP SELF DEFENSE SYSTEM (SSDS) MK 1	SUBHEAD 14UQ

Cost Element/ FISCAL YEAR	QTY	UNIT COST (000)	LOCATION OF PCO	RFP ISSUE DATE	CONTRACT METHOD & TYPE	CONTRACTOR AND LOCATION	AWARD DATE	DATE OF FIRST DELIVERY	SPECS AVAILABLE NOW	IF NO WHEN AVAILABLE
FISCAL YEAR (98) LSD (UQ001)	2	5,098	NAVSEA	7/96	FFP	HUGHES 3970 Sherman St San Diego CA 92110	9/96	3/97	YES	N/A
FISCAL YEAR (99) LSD (UQ001)	2	5,073	NAVSEA	8/98	FFP	HUGHES 3970 Sherman St San Diego CA 92110	1/99	7/99	YES	N/A

D. REMARKS

CLASSIFICATION: **UNCLASSIFIED**

P3A **INDIVIDUAL MODIFICATION**

MODELS OF SYSTEM AFFECTED: SHIP SELF DEFENSE SYSTEM (SSDS) MK 0 TYPE MODIFICATION: ShipAlt MODIFICATION TITLE:

DESCRIPTION/JUSTIFICATION:

Provides decision support to weapons systems operators and managers, using data from AN/SLQ 32 and CIWS radars. Employs ruggedized personal computer based workstations and an ETHERNET LAN, designated for Interim use on DD 963 and FFG 7 Class ships.

The Inventory Objective for this item = 16

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: Milestone IV decision ASN (RD&A) approved July 1995

	FY 1994 & Prior		FY 1995		FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$
FINANCIAL PLAN (IN MILLIONS)																								
RDT&E																							0	0.0
PROCUREMENT			16	7.2																			16	7.2
INSTALLATION KITS																								0.0
INSTALLATION KITS NONRECURRING																								0.0
EQUIPMENT			16	7.2																				7.2
EQUIPMENT NONRECURRING																								0.0
ENGINEERING CHANGE ORDERS																								0.0
DATA																								0.0
TRAINING EQUIPMENT																								0.0
SUPPORT EQUIPMENT																								0.0
OTHER (Production Support)																								0.0
OTHER (Training)																								0.0
OTHER (CSS)																								0.0
INTERIM CONTRACTOR SUPPORT																								0.0
TOTAL PROCUREMENT		0.0	16.0	7.2		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		7.2
INSTALL COST*		0.0		0.0		0.0		1.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		1.0
TOTAL PROGRAM COST		0.0	16.0	7.2		0.0		1.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		8.2

* Includes FMP, Planning, and Non-FMP Installation

P3A (Continued) **INDIVIDUAL MODIFICATION (Continued)**

MODELS OF SYSTEMS AFFECTED: SHIP SELF DEFENSE SYSTEM (SSDS) MK 0 MODIFICATION TITLE:

INSTALLATION INFORMATION:
METHOD OF IMPLEMENTATION: Tiger Team / AIT
ADMINISTRATIVE LEADTIME: 6 Months PRODUCTION LEADTIME: 4 Months
CONTRACT DATES: FY 1997: N/A FY 1998: N/A FY 1999: N/A
DELIVERY DATE: FY 1997: Oct-96 FY 1998: N/A FY 1999: N/A

($ in Millions)

Cost:	Prior Years		FY 1995		FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
PRIOR YEARS																								
FY 1995 EQUIPMENT							16	1.0															16	1.0
FY 1996 EQUIPMENT																								
FY 1997 EQUIPMENT																								
FY 1998 EQUIPMENT																								
FY 1999 EQUIPMENT																								
FY 2000 EQUIPMENT																								
FY 2001 EQUIPMENT																								
FY 2002 EQUIPMENT																								
FY 2003 EQUIPMENT																								
TO COMPLETE																								

INSTALLATION SCHEDULE: SHIP AVAILABILITIES

	FY 1996 & Prior	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001				FY 2002				FY 2003				TC	TOTAL
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		
In	0	3	4	3	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16
Out	0	3	4	3	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16

CLASSIFICATION: **UNCLASSIFIED**

P3A **INDIVIDUAL MODIFICATION**

MODELS OF SYSTEM AFFECTED: SHIP SELF DEFENSE SYSTEM (SSDS) MK 1 TYPE MODIFICATION: ShipAlt / New Construction MODIFICATION TITLE:

DESCRIPTION/JUSTIFICATION:

Implements an evolutionary acquisition of improved ship self defense capabilities against anti-ship cruise missiles for selected non-AEGIS ships by integrating existing programmed anti-air warfare stand alone systems. It provides an automated quick reaction and multi-target engagement capability emphasizing performance in the littoral environment. Integration focuses on coordinating existing sensor information, providing threat identificatio and evaluation, assessing defensive readiness, and recommending optimized defensive tactical response to counter single and multiple anti-ship cruise missile attacks.

The Inventory Objective for this item = 36

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: Milestone III decision pending ASN (RD&A) approval

	FY 1994 & Prior		FY 1995		FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$
FINANCIAL PLAN (IN MILLIONS)																								
RDT&E	2	27.1	3	38.8	2	40.4																	7	106.3
PROCUREMENT					3	10.8	0	0.0	2	10.2	2	10.1	6	36.9	5	36.2	5	36.6	5	37.1	8	62.9	36	240.8
INSTALLATION KITS																								0.0
INSTALLATION KITS NONRECURRING						0.0		0.0		0.0		0.0		0.8		2.4		2.3		3.0		36.7		45.2
EQUIPMENT					3	10.8	0	0.0	2	10.2	2	10.1	4	22.4	4	28.8	4	29.1	5	37.1	8	62.9		211.4
EQUIPMENT NONRECURRING																								0.0
ENGINEERING CHANGE ORDERS						0.0		0.0		0.0		0.9		0.0		2.0		1.8		1.5		58.8		65.0
DATA																								0.0
TRAINING EQUIPMENT															1	7.4	1	7.5						14.9
SUPPORT EQUIPMENT													2	14.4										14.4
OTHER (Production Support)						4.0		7.3		1.2		3.4		7.0		6.0		6.1		6.3		10.5		51.8
OTHER (Training)						0.0		2.0		0.1		2.3		2.6		2.0		2.0		1.4		0.0		12.4
OTHER (SWY Support)						0.0		0.0		0.0		0.8		0.8		0.0		0.0		0.0		0.0		1.6
OTHER (CSS)						0.4		0.2		0.1		0.5		0.4		0.6		0.6		0.6		1.8		5.2
INTERIM CONTRACTOR SUPPORT																								0.0
TOTAL PROCUREMENT						15.2		9.5		11.6		18.1		48.5		49.2		49.5		49.8		170.7		422.1
INSTALL COST*						0.9		7.5		5.9		4.9		9.3		11.3		14.8		13.6		45.6		113.8
TOTAL PROGRAM COST						16.1		17.0		17.5		22.9		57.9		60.5		64.2		63.5		216.3		535.9

* Includes FMP, Planning, and Non-FMP Installation

P3A (Continued) **INDIVIDUAL MODIFICATION (Continued)**

MODELS OF SYSTEMS AFFECTED: SHIP SELF DEFENSE SYSTEM (SSDS) MK 1 MODIFICATION TITLE:

INSTALLATION INFORMATION:
METHOD OF IMPLEMENTATION: AIT / Shipyard
ADMINISTRATIVE LEADTIME: 4 Months PRODUCTION LEADTIME: 6 Months
CONTRACT DATES: FY 1997: N/A FY 1998: N/A FY 1999: Jan-99
DELIVERY DATE: FY 1997: N/A FY 1998: N/A FY 1999: Jul-00

($ in Millions)

Cost:	Prior Years		FY 1995		FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
PRIOR YEARS																								
FY 1995 EQUIPMENT																								
FY 1996 EQUIPMENT					0	0.9	2	7.5	1	5.8	0												3	14.2
FY 1997 EQUIPMENT																							0	0
FY 1998 EQUIPMENT											2	4.9											2	4.9
FY 1999 EQUIPMENT													2	5.5									2	5.5
FY 2000 EQUIPMENT													2	3.8	4	9.3							6	13.1
FY 2001 EQUIPMENT															1	2.0	4	12.7					5	14.7
FY 2002 EQUIPMENT																	1	2.0	4	13.6			5	15.6
FY 2003 EQUIPMENT																					5	17.1	5	17.1
TO COMPLETE																					8	28.5	8	28.5

INSTALLATION SCHEDULE: SHIP AVAILABILITIES

	FY 1996 & Prior	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001				FY 2002				FY 2003				TC	TOTAL
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		
In	0	0	1	1	0	0	0	1	0	0	1	1	0	0	1	3	0	1	2	2	0	0	2	2	1	1	0	2	1	13	36
Out	0	0	0	1	1	0	0	0	1	0	0	1	1	0	0	1	3	0	1	2	2	0	0	2	2	1	1	0	2	14	36

BUDGET ITEM JUSTIFICATION SHEET P-40								DATE: February 1998					
APPROPRIATION/BUDGET ACTIVITY OTHER PROCUREMENT, NAVY BA - 4 ORDNANCE SUPPORT EQUIPMENT								P-1 ITEM NOMENCLATURE/LINE ITEM # *AEGIS SUPPORT EQUIPMENT/524600/524605*					
Program Element for Code B Items:								OTHER RELATED PROGRM ELEMENTS					
	Prior Years	ID Code	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total
QUANTITY	N/A	N/A	N/A									N/A	
EQUIPMENT COST (In Millions)	N/A	A	*N/A*		$31.3	$20.7	$83.2	$85.7	$65.3	$71.9	$68.2	N/A	$426.1
SPARES COST (In Millions)	N/A	A	*N/A*		0.000	0.700	0.491	0.202	0.343	0.000	0.900	N/A	2.636

PROGRAM DESCRIPTION/JUSTIFICATION:

1. This program provides equipments for shore facilities and for shipboard upgrades to support the battle readiness of AEGIS Cruisers and Destroyers in the following area: a. Special Tooling and Test Equipment for AEGIS unique depots; b. Computer, displays and simulators for the AEGIS Computer Center (ACC) at Dahlgren, Va.; c. Weapon/Combat System equipments for the AEGIS Combat System Center (ACSC) at Wallops Island, Va.; d. Weapon System Training equipment for the AEGIS Training & Readiness Center (ATRC) at Dahlgren, Va.; e. AEGIS Weapon System ORDALT procurement; f. AEGIS Weapon System SHIPALT procurement; g. AEGIS Common Equipment to support shorter Regular Overhauls and Selected Restricted Availabilities. Includes Weapon and Ship System Components that require long repair turn-around; h. Field Activity Integrated Communications Equipment; i. Procurement of Smart Ship Type Systems; j. Warfighting Improvement Program (WIP) alteration equipment; provides UYK-43 (LoBoy) computers, COTS computer and other SHIPALT equipment for baseline 3 Cruisers; k. Shipboard equipment Installation.

2. The FY 1997-03 funds will be used to upgrade three centers (AEGIS Computer Center, AEGIS Training & Readiness Center (ATRC) and AEGIS Combat Systems Center) to properly accommodate CG 47 and DDG 51 Combat System Baselines and to provide shipboard SHIPALT and ORDALT equipments for four CG 47 Class Cruiser Baselines and two Destroyer Baselines. Funding is also for the installation of equipment including the Fleet Modernization Program, training equipment, and other shore facilities. These include, among others, the following major Weapon/Combat systems:

	DESCRIPTION	APPLICABLE HULLS
CG BASELINE 1	SPY-1A RADAR	CG-47 - CG 51
	AEGIS DISPLAY SYSTEM MARK I	
	MARK 26 LAUNCHING SYSTEM	
	LAMPS MARK III HELICOPTER	
	MK 116 MOD 4 UNDERWATER FIRE CONTROL	
	UYK-7/20 COMPUTERS	
	UYA-4 DISPLAYS	
	MK 86 GUNFIRE CONTROL SYSTEM	
CG BASELINE 2	CG BASELINE 1 PLUS	CG 52 -CG 58
	TOMAHAWK WEAPON SYSTEM	
	ANTI-SUBMARINE WARFARE UPGRADE SQQ-89	
	MK 41 VERTICAL LAUNCH SYSTEM IN PLACE OF MK 26	
	BACKFIT COMPUTERS/AN/UYQ-70 DISPLAYS	
	ECSE UPGRADE/COTS COMPUTER	

BUDGET ITEM JUSTIFICATION SHEET P-40 CONTINUATION	DATE: February 1998
APPROPRIATION/BUDGET ACTIVITY OTHER PROCUREMENT, NAVY BA - 4 ORDNANCE SUPPORT EQUIPMENT	P-1 ITEM NOMENCLATURE/LINE ITEM # *AEGIS SUPPORT EQUIPMENT/524600/524605*

	DESCRIPTION	APPLICABLE HULLS
CG BASELINE 3	CG BASELINE 2 PLUS SPY-1B RADAR IN PLACE OF SPY-1A UYQ-21 DISPLAYS IN PLACE OF UYA-4 BACKFIT UYK-43 (LoBoy)/44 COMPUTERS ECSE UPGRADE/COTS COMPUTER	CG 59 - CG 64
CG BASELINE 4	CG BASELINE 3 PLUS VERTICAL LAUNCH ASROC SM-2 MISSILE UPGRADE UYK 43/44 COMPUTERS IN PLACE OF UYK-7/20s ECSE UPGRADE/COTS COMPUTERS	CG 65 - CG 73
DDG BASELINE 4	CG BASELINE 3 PLUS SPY-1D RADAR IN PLACE OF SPY-1B MK 160 GUN COMPUTING SYSTEM IN PLACE OF MK 86 UYK 43/44 COMPUTERS IN PLACE OF UYK-7/20s	DDG 51 - DDG 67
DDG BASELINE 5	DDG BASELINE 4 PLUS JOINT TACTICAL INFORMATION DISTRIBUTION SYSTEM (JTIDS/COMMAND AND CONTROL (C2P) TADIL J COMBAT DIRECTION FINDING (CDF) TACTICAL DATA INFORMATION EXCHANGE SYTEM (TADIX B) AN/SLQ-32 (V) 3 ACTIVE ELECTRONIC CONTERMEASURES (ECM) AEGIS EXTENDED RANGE (ER) MISSILE	DDG 68 - DDG 78

WEAPONS SYSTEM COST ANALYSIS P-5			Weapon System	DATE: Feb-98
APPROPRIATION/BUDGET ACTIVITY Other Procurement, Navy BA - 4 ORDNANCE SUPPORT EQUIPMENT		ID Code	P-1 ITEM NOMENCLATURE/SUBHEAD AEGIS SUPPORT EQUIPMENT AEGIS SUPPORT EQUIPMENT/524600/524605	

COST CODE	ELEMENT OF COST	ID Code	TOTAL COST IN THOUSANDS OF DOLLARS											
						FY 1997			FY 1998			FY 1999		
			QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST
	SPONSOR N86													
L7001	DEPOT SPECIAL TOOLING/TEST EQPT	A						490			348			1500
L7002	WEARABLE COMPUTER	A						3000			0			0
L7003	AEGIS COMPUTER CENTER EQPT	A						3238			409			1364
L7004	BASELINE CONSOLIDATION	A						0			0			30300
L7005	SMART SHIP TYPE SYSTEMS	A						200			0			12821
L7006	AEGIS COMBAT SYSTEM CENTER EQPT	A						1985			728			2762
L7007	AEGIS TRAINING & READINESS CENTER	A						1000			373			909
L7010	AEGIS WEAPON SYSTEM ORDALTS	A						3341			1169			3000
L7011	AEGIS WEAPON SYSTEM SHIPALTS	A						3645			3615			2377
L7013	AEGIS COMMON EQUIPMENT	A						1599			0			485
L7016	FIELD ACT'Y INTEGRATED COMM EQPT	A						305			178			438
L7600	INSTALLATION OF EQPT, FMP	A						12519			13835			27213
TOTAL								**31,322**			**20,655**			**83,169**

BUDGET PROCUREMENT HISTORY AND PLANNING EXHIBIT (P-5A)					Weapon System			A. DATE February 1998		
B. APPROPRIATION/BUDGET ACTIVITY Other Procurement, Navy BA - 4 ORDNANCE SUPPORT EQUIPMENT					C. P-1 ITEM NOMENCLATURE AEGIS SUPPORT EQUIPMENT-52460				SUBHEAD A4L7	
Cost Element/ FISCAL YEAR	**QTY**	**UNIT COST (000)**	**LOCATION OF PCO**	**RFP ISSUE DATE**	**CONTRACT METHOD & TYPE**	**CONTRACTOR AND LOCATION**	**AWARD DATE**	**DATE OF FIRST DELIVERY**	**SPECS AVAILABLE NOW**	**IF NO WHEN AVAILABLE**
FISCAL YEAR 97										
L7002										
WEARABLE COMPUTER	200	15	NAVSEA	6/98	Delivery Order	CDI BLOOMINGTON, MN	8/97	TBD	YES	-
L7003										
CABLE	1 LOT	750	NAVSEA	10/96	SS/FP	UNICOR MEMPHIS, TN	11/96	1/99	YES	-
COMBAT SYSTEM COMPONENTS	1 LOT	1188	NSWC/DD	TBD	TBD	VARIOUS	5/97	2/99	YES	-
CP MODERNIZATION	1 LOT	800	NSWC/DD	2/97	SS/FP	DEC GREENBELT, MD	4/97	1/99	YES	-
C-SCA NETWORK	1 LOT	500	NSWC/DD	2/97	SS/FP	" '	4/97	1/99	YES	-
L7006										
COMBAT SYSTEM COMPONENTS	1 LOT	985	NSWC/DD	TBD	TBD	VARIOUS	2/97	12/97	YES	-
UYH-16	1 LOT	1000	NAVSEA	11/96	BOA	CDI BLOOMINGTON, MN	1/97	12/97	YES	-
L7007										
FAULT INSERTION DEVICES (FIDS)	1 LOT	302	NAVSEA	11/96	BOA	HUGHES FULLERTON, CA	1/97	1/98	YES	-
CAST PART TASK TRAINER/EM	1 LOT	698	CO ATRC/DD	2/97	BOA	NOS/IH INDIAN HEAD, MD	4/97	1/98	YES	-
L7010										
O/A 20259, ECP R1524A2R1	20	50	DPRO/RAYTHEON	10/96	BOA	RAYTHEON BURLINGTON, MA	12/96	5/98	YES	-
O/A 20285, ECP A1543R1A1	37	20	DCMC/LM	3/97	BOA	LOCKHEED MARTIN MOORESTOWN, NJ	3/97	3/98	YES	-
O/A 20276, ECP A1508R2	1 LOT	200	DCMC/LM	TBD	BOA	" "	6/97	6/98	YES	-
O/A 20254, ECP A1438R1	5	226	DCMC/LM	TBD	BOA	" "	6/97	6/98	YES	-
20303 ECP R1562	170	0.1	DPRO/RAYTHEON	TBD	BOA	RAYTHEON BURLINGTON, MA	12/96	5/98	YES	-
D. REMARKS										

BUDGET PROCUREMENT HISTORY AND PLANNING EXHIBIT (P-5A)	Weapon System	A. DATE
		February 1998

B. APPROPRIATION/BUDGET ACTIVITY	C. P-1 ITEM NOMENCLATURE	SUBHEAD
Other Procurement, Navy BA - 4 ORDNANCE SUPPORT EQUIPMENT	AEGIS SUPPORT EQUIPMENT-52460	A4L7

Cost Element/ FISCAL YEAR	QTY	UNIT COST (000)	LOCATION OF PCO	RFP ISSUE DATE	CONTRACT METHOD & TYPE	CONTRACTOR AND LOCATION	AWARD DATE	DATE OF FIRST DELIVERY	SPECS AVAILABLE NOW	IF NO WHEN AVAILABLE
L7011										
MMSD, AN/UYH-16	2	206	NAVSEA	12/96	SS/FP	CDI BLOOMINGTON MN	2/97	2/99	YES	-
SGS NEW GENERATION COMPUTER, MK 162	5	152	NAVSEA	2/97	SS/FP	" "	4/97	2/99	YES	-
RD358 REFURBISHMENT/ RECONFIGURATION	4	130	NAVSEA	N/A	WR	NSWC/CRANE	4/97	2/99	YES	-
UYK 43 MOD KITS	5	36	NAVSEA	2/97	SS/FP	LMTS ST. PAUL, MN	4/97	2/99	YES	-
BFTT, C/P INTEGRATION	N/A	696	NSWC/DD	TBD	TBD	VARIOUS	3/97	4/98	YES	-
BFTT, SUPPLEMENTAL COMPONENTS	3	159	NAVSEA	N/A	WR	NSWC/PD	4/97	4/98	YES	-
MFL, MULTI-FREQUENCY LINK 11 DATA TIME	4	150	FISC/WNY	N/A	WR	MIKROS	4/97	4/98	YES	-
L7013										
ACE FOR DDG-51 CLASS	1 LOT	799	SUPSHIP/BATH	TBD	SS/FP	BATH IRON WORKS BATH, ME	7/97	1/98	YES	-
ACE FOR CG-47 CLASS	1 LOT	800	SUPSHIP/PAS	12/96	SS/FP	ISI/LITTON PASCAGOULA, MS	2/97	1/98	YES	-
FISCAL YEAR 98										
L7003										
COMMERCIAL SYS COMP	1 LOT	100	NSWC/DD	TBD	TBD	VARIOUS	5/98	2/00	YES	-
CP MODERNIZATION	1 LOT	200	NSWC/DD	TBD	TBD	" "	5/98	2/00	YES	-
TACTICAL SYSTEM	1 LOT	109	NSWC/DD	TBD	TBD	" "	5/98	2/00	YES	-
L7006										
NON-TACTICAL EQPT	1 LOT	728	NSWC/DD	TBD	TBD	VARIOUS	2/98	12/98	YES	-

D. REMARKS

LMTS: LOCKHEED MARTIN TACTICAL SYSTEMS (FORMERLY UNISYS)

CLASSIFICATION: **UNCLASSIFIED**

BUDGET PROCUREMENT HISTORY AND PLANNING EXHIBIT (P-5A)	Weapon System	A. DATE February 1998
B. APPROPRIATION/BUDGET ACTIVITY Other Procurement, Navy BA - 4 ORDNANCE SUPPORT EQUIPMENT	C. P-1 ITEM NOMENCLATURE AEGIS SUPPORT EQUIPMENT-52460	SUBHEAD A4L7

Cost Element/ FISCAL YEAR	QTY	UNIT COST (000)	LOCATION OF PCO	RFP ISSUE DATE	CONTRACT METHOD & TYPE	CONTRACTOR AND LOCATION	AWARD DATE	DATE OF FIRST DELIVERY	SPECS AVAILABLE NOW	IF NO WHEN AVAILABLE
L7007										
BACK PLANE TRAINER	1 LOT	175	NSWC/DD	N/A	TBD	VARIOUS	3/98	1/00	YES	-
CAST PART TASK TRAINER/EM	1 LOT	198	CO ATRC/DD	N/A	WR	NOS/IH INDIAN HEAD, MD	1/98	1/00	YES	-
L7010										
O/A 20254, ECP A1438R1	1 LOT	997	DCMC/LM	TBD	BOA	LOCKHEED/MARTIN MOORESTOWN, NJ	2/98	2/99	YES	-
O/A 20097, ECP A1335RIC	1 LOT	172	DCMC/LM	TBD	BOA	" "	2/98	2/99	YES	-
L7011										
MMSD, AN/UYH-16	2	212	NAVSEA	TBD	SS/FP	CDI BLOOMINGTON, MN	4/98	2/00	YES	-
CLSD	1	119	NAVSEA	N/A	( )	AMPRO	4/98	3/99	YES	-
UYK 43 MODKITS	6	32	NAVSEA	TBD	SS/FP	LMTS ST. PAUL, MN	4/98	2/00	YES	-
TAC-4 EQUIP.	2	186	NAVSEA/NICSMC	-	-	HP	4/98	5/99	YES	-
ORTS UPGRADE	3	333	NAVSEA	TBD	BOA	LOCKHEED/MARTIN MOORESTOWN, NJ	6/98	4/00	YES	-
AADC	1	1800	NAVSEA	N/A	SS/FP	APL BALTIMORE, MD	3/98	6/99	NO	-

D. REMARKS

LMTS: LOCKHEED MARTIN TACTICAL SYSTEMS (FORMERLY UNISYS)

BUDGET PROCUREMENT HISTORY AND PLANNING EXHIBIT (P-5A)	Weapon System	A. DATE
		February 1998

B. APPROPRIATION/BUDGET ACTIVITY	C. P-1 ITEM NOMENCLATURE	SUBHEAD
Other Procurement, Navy BA - 4 ORDNANCE SUPPORT EQUIPMENT	AEGIS SUPPORT EQUIPMENT-52460	A4L7

Cost Element/ FISCAL YEAR	QTY	UNIT COST (000)	LOCATION OF PCO	RFP ISSUE DATE	CONTRACT METHOD & TYPE	CONTRACTOR AND LOCATION	AWARD DATE	DATE OF FIRST DELIVERY	SPECS AVAILABLE NOW	IF NO WHEN AVAILABLE
FISCAL YEAR 99										
L7003										
TACTICAL SYSTEM COMPONENTS	1 LOT	1364	NSWC/DD	TBD	TBD	VARIOUS	3/99	1/01	YES	-
L7004										
BASELINE CONSOLIDATION										-
SPY 1D UPGRADES	6	1950	NAVSEA	N/A[1]	BOA	LOCKHEED/MARTIN MOORESTOWN, NJ	2/99	1/01	YES	-
ADJUNCT PROCESSORS	6	3100	NAVSEA	N/A[1]	BOA	LOCKHEED/MARTIN EAGAN, MINN	2/99	11/01	YES	-
L7005										
WIRELESS INTERNAL COMMUNICATION SYSTEM	2	500	NAVSEA	TBD	TBD	TBD	1/98	11/99	YES	-
SMART SHIP DAMAGE CONTROL EQUIPMENT	2	500	NAVSEA	TBD	TBD	TBD	1/98	11/99	YES	-
FUEL CONTROL SYSTEM	2	500	NAVSEA	TBD	TBD	TBD	1/98	11/99	YES	-
SHIPBOARD AREA NETWORK	2	1000	NAVSEA	TBD	TBD	TBD	1/98	11/99	YES	-
INTEGRATED BRIDGE SYSTEM	2	800	NAVSEA	TBD	TBD	TBD	1/98	11/99	YES	-
INTEGRATED CONDITION ASSESSMENT SYSTEM	2	100	NAVSEA	TBD	TBD	TBD	1/98	11/99	YES	-
MACHINERY CONTROL SYSTEM	2	2500	NAVSEA	TBD	TBD	TBD	1/98	11/99	YES	-

D. REMARKS

1 UTILIZES EXISTING CONTRACTS.

BUDGET PROCUREMENT HISTORY AND PLANNING EXHIBIT (P-5A)	Weapon System	A. DATE February 1998
B. APPROPRIATION/BUDGET ACTIVITY Other Procurement, Navy BA - 4 ORDNANCE SUPPORT EQUIPMENT	C. P-1 ITEM NOMENCLATURE AEGIS SUPPORT EQUIPMENT-52460	SUBHEAD A4L7

Cost Element/ FISCAL YEAR	QTY	UNIT COST (000)	LOCATION OF PCO	RFP ISSUE DATE	CONTRACT METHOD & TYPE	CONTRACTOR AND LOCATION	AWARD DATE	DATE OF FIRST DELIVERY	SPECS AVAILABLE NOW	IF NO WHEN AVAILABLE
L7005 (CONTINUED)										
ENGINEERING AND LOGISTICS SUPPORT	1LOT	1021	NAVSEA	TBD	TBD	TBD	1/98	11/99	YES	-
L7006										
EQPT MODERNIZATION	1 LOT	2762	NSWC/DD	TBD	TBD	VARIOUS	2/99	12/99	YES	-
L7007										
CAST PART TASK TRAINER	1 LOT	609	CO ATRC DD	TBD	BOA	NOS/IH INDIAN HEAD, MD	2/99	12/99	YES	-
FAULT INSERTION DEVICES (FIDS)	1 LOT	300	NAVSEA	TBD	BOA	HUGHES FULLERTON, CA	2/99	12/99	YES	-
L7010										
20259 TBD, ECP R1524A2R1	20	50	DPRO/RAYTHEON	TBD	BOA	RAYTHEON	5/99	5/00	YES	-
O/A 20097, ECP A1335R1C3	1 LOT	400	DCMC/LM	TBD	BOA	LOCKHEED/MARTIN MOORESTOWN, NJ	1/99	1/00	YES	-
O/A TBD, ECP A1449C2	1 LOT	400	DCMC/LM	TBD	BOA	" "	5/99	6/00	YES	-
20254 ECP A1438R1	1 LOT	300	DCMC/LM	TBD	BOA	" "	5/99	6/01	YES	-
20249/50/51 ECP A1493A2	1 LOT	200	DCMC/LM	TBD	BOA	" "	5/99	6/02	YES	-
L7011										
MMSD, AN/UYH-16	3	214	NAVSEA	TBD	SS/FP	CDI BLOOMINGTON, MN	4/99	2/01	YES	-
SGS, NEW GENERATION COMPUTER, MK 162	3	162	NAVSEA	TBD	SS/FP	" "	4/99	2/01	YES	-
SGS UPGRADE FOR DNMFL	7	94	NAVSEA	TBD	BOA	" "	7/99	5/01	YES	-
UYK 43 MODKITS	3	37	NAVSEA	TBD	SS/FP	LMTS ST. PAUL, MN	4/99	2/01	YES	-
ACTS REHOST	4	120	NAVSEA	N/A	WR	NSWC/DD	7/99	5/01	YES	-

D. REMARKS

BUDGET PROCUREMENT HISTORY AND PLANNING EXHIBIT (P-5A)	Weapon System	A. DATE
		February 1998

B. APPROPRIATION/BUDGET ACTIVITY	C. P-1 ITEM NOMENCLATURE	SUBHEAD
Other Procurement, Navy BA - 4 ORDNANCE SUPPORT EQUIPMENT	AEGIS SUPPORT EQUIPMENT-52460	A4L7

Cost Element/ FISCAL YEAR	QTY	UNIT COST (000)	LOCATION OF PCO	RFP ISSUE DATE	CONTRACT METHOD & TYPE	CONTRACTOR AND LOCATION	AWARD DATE	DATE OF FIRST DELIVERY	SPECS AVAILABLE NOW	IF NO WHEN AVAILABLE
L7013										
ACE FOR DDG-51 CLASS	1 LOT	242	SUPSHIPBATH	TBD	SS/FP	BATH IRON WORKS BATH, ME	7/99	1/00	YES	-
ACE FOR CG-47 CLASS	1 LOT	243	SUPSHIPBATH	TBD	SS/FP	ISI LITTON PASCAGOULA, MS	4/99	1/00	YES	-

D. REMARKS

CLASSIFICATION: **UNCLASSIFIED**

P3A **INDIVIDUAL MODIFICATION**

MODELS OF SYSTEM AFFECTED: AEGIS WEAPONS SYSTEMS TYPE MODIFICATION: B/L 3 ENG UPGRADE MODIFICATION TITLE: AEGIS CRUISER, B/L 3 ENG UPGRADE

DESCRIPTION/JUSTIFICATION:

The Baseline 3 upgrade provides major performance enhancements in the areas of force command, Anti-Air Warfare (AAW) and Strike Warfare (STW) which are required to meet Navy Force Level warfare objectives. The upgrade provides the required computing and display capability to accommodate Cooperative Engagement Capability (CEC), Theater Ballistic Missile Defense (TBMD), JTIDS and SM-2 Block IV missiles.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

	FY 1994 & Prior		FY 1995		FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$
FINANCIAL PLAN (IN MILLIONS)																								
RDT&E																								0.0
PROCUREMENT																								
INSTALLATION KITS																								0.0
INSTALLATION KITS NONRECURRING																								0.0
EQUIPMENT																								0.0
EQUIPMENT NONRECURRING	4	100.5			2	40.8																	6	141.3
ENGINEERING CHANGE ORDERS																								0.0
DATA																								0.0
TRAINING EQUIPMENT																								0.0
SUPPORT EQUIPMENT																								0.0
OTHER																								0.0
OTHER																								0.0
OTHER																								0.0
INTERIM CONTRACTOR SUPPORT																								0.0
PROCUREMENT COST		100.5				40.8																		141.3
INSTALL COST					1	7.5	1	10.6	1	11.0	2	16.8	1	8.6									6	54.5
TOTAL PROGRAM COST		100.5				48.3		10.6		11.0		16.8		8.6										195.8

P3A (Continued) **INDIVIDUAL MODIFICATION (Continued)**

MODELS OF SYSTEMS AFFECTED: **AEGIS WEAPONS SYSTEM** MODIFICATION TITLE: AEGIS CRUISER, B/L 3 ENG UPGRADE

INSTALLATION INFORMATION:
METHOD OF IMPLEMENTATION: **Scheduled availabilities in public and private shipyards. Admin L/T 3 Mo. Prod L/T 33 Mo.**
ADMINISTRATIVE LEADTIME: 3 Months PRODUCTION LEADTIME: 33 Months
CONTRACT DATES: FY 1997: 4/97 FY 1998: 5/98 FY 1999: 1/99
DELIVERY DATE: FY 1997: 2/98 FY 1998: 1/99 FY 1999: 10/99

($ in Millions)

Cost:	Prior Years		FY 1995		FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		To Complete		Total	
	Qty	**$**	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
PRIOR YEARS					1	7.5	1	10.6	1	11.3	1	5.5											4	34.9
FY 1995 EQUIPMENT																								
FY 1996 EQUIPMENT											1	11.3	1	8.6									2	19.9
FY 1997 EQUIPMENT																								
FY 1998 EQUIPMENT																								
FY 1999 EQUIPMENT																								
FY 2000 EQUIPMENT																								
FY 2001 EQUIPMENT																								
FY 2002 EQUIPMENT																								
FY 2003 EQUIPMENT																								
TO COMPLETE																								

INSTALLATION SCHEDULE: SHIP AVAILABILITIES

	FY 1996 & Prior	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001				FY 2002				FY 2003				TC	TOTAL
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		
In	1	0	1	0	0	0	0	1	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Out	0	0	1	0	0	1	0	0	0	0	2	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6

CLASSIFICATION: **UNCLASSIFIED**

P3A **INDIVIDUAL MODIFICATION**

MODELS OF SYSTEM AFFECTED: AEGIS WEAPONS SYSTEMS TYPE MODIFICATION: BASELINE CONSOLIDATION MODIFICATION TITLE: AEGIS DDG, B/L CONSOLIDATION

DESCRIPTION/JUSTIFICATION:

The Baseline Consolidation is a plan developed by the Navy to accelerate forward fit introduction of TBMD. The OPN funding below will install TBMD at PSA for DDG 79-82 and PDA for 83-84.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

	FY 1994 & Prior		FY 1995		FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$
FINANCIAL PLAN (IN MILLIONS)																								
RDT&E																								0.0
PROCUREMENT																								
INSTALLATION KITS																								0.0
INSTALLATION KITS NONRECURRING																								0.0
EQUIPMENT											6	30.3											6	27.7
EQUIPMENT NONRECURRING																								0.0
ENGINEERING CHANGE ORDERS																								0.0
DATA																								0.0
TRAINING EQUIPMENT																								0.0
SUPPORT EQUIPMENT																								0.0
OTHER																								0.0
OTHER																								0.0
OTHER																								0.0
INTERIM CONTRACTOR SUPPORT																								0.0
PROCUREMENT COST											6	30.3												27.7
INSTALL COST															6	2.4							6	2.4
TOTAL PROGRAM COST												30.3				2.4								32.7

* Shore site equipment.

P3A (Continued) **INDIVIDUAL MODIFICATION (Continued)**

MODELS OF SYSTEMS AFFECTED: **AEGIS WEAPONS SYSTEM** MODIFICATION TITLE: AEGIS DDG, B/L CONSOLIDATION

INSTALLATION INFORMATION:
METHOD OF IMPLEMENTATION: **Scheduled availabilities in public and private shipyards. Admin L/T 3 Mo. Prod L/T 33 Mo.**
ADMINISTRATIVE LEADTIME: 3 Months PRODUCTION LEADTIME: 21 Months
CONTRACT DATES: FY 1997: FY 1998: FY 1999:
DELIVERY DATE: FY 1997: FY 1998: FY 1999:

($ in Millions)

Cost:	Prior Years		FY 1995		FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		To Complete		Total	
	Qty	**$**	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
PRIOR YEARS																								
FY 1995 EQUIPMENT																								
FY 1996 EQUIPMENT																								
FY 1997 EQUIPMENT																								
FY 1998 EQUIPMENT																								
FY 1999 EQUIPMENT															6	2.4							6	2.4
FY 2000 EQUIPMENT																								
FY 2001 EQUIPMENT																								
FY 2002 EQUIPMENT																								
FY 2003 EQUIPMENT																								
TO COMPLETE																								

INSTALLATION SCHEDULE: SHIP AVAILABILITIES

	FY 1996	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001				FY 2002				FY 2003				TC	
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		TOTAL
In	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	2	1	0	0	0	0	0	0	0	0	0	6
Out	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	2	1	0	0	0	0	0	0	0	0	6

CLASSIFICATION: **UNCLASSIFIED**

P3A **INDIVIDUAL MODIFICATION**

MODELS OF SYSTEM AFFECTED: AEGIS WEAPONS SYSTEMS TYPE MODIFICATION: AWS ORDALTS MODIFICATION TITLE: ORDNANCE ALTERATIONS

DESCRIPTION/JUSTIFICATION:

This program provides for procurement and installation of emerging fact-of-life and safety modifications to the AEGIS Weapon System (AWS). These requirements will continue through the life of the Ships.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

	FY 1994 & Prior		FY 1995		FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL
	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	$
FINANCIAL PLAN (IN MILLIONS)																							
RDT&E																							0.0
PROCUREMENT																							
INSTALLATION KITS																							0.0
INSTALLATION KITS NONRECURRING																							0.0
EQUIPMENT	VAR	14.9	VAR	3.0	VAR	3.0	VAR	3.3	VAR	1.2	VAR	3.0	VAR	5.6	VAR	6.1	VAR	5.3	VAR	5.5	VAR	TBD	VAR	50.9
EQUIPMENT NONRECURRING																							0.0
ENGINEERING CHANGE ORDERS																							0.0
DATA																							0.0
TRAINING EQUIPMENT																							0.0
SUPPORT EQUIPMENT																							0.0
OTHER																							0.0
OTHER																							0.0
OTHER																							0.0
INTERIM CONTRACTOR SUPPORT																							0.0
PROCUREMENT COST		14.9		3.0		3.0		3.3		1.2		3.0		5.6		6.1		5.3		5.5		TBD		50.9
INSTALL COST					VAR	4.6	VAR	1.9	VAR	0.9	VAR	7.4	VAR	4.1	VAR	6.2	VAR	5.0	VAR	5.6	VAR	TBD	VAR	35.7
TOTAL PROGRAM COST		14.9		3.0		7.6		5.2		2.1		10.4		9.7		12.3		10.3		11.1		TBD		86.6

P3A (Continued) **INDIVIDUAL MODIFICATION (Continued)**

MODELS OF SYSTEMS AFFECTED: **AEGIS WEAPONS SYSTEM** MODIFICATION TITLE: ORDNANCE ALTERATIONS

INSTALLATION INFORMATION:
METHOD OF IMPLEMENTATION: **Original Equipment Manufacturer (OEM) Field Teams.**
ADMINISTRATIVE LEADTIME: Varies Months PRODUCTION LEADTIME: Varies Months
CONTRACT DATES: FY 1997: Various FY 1998: Various FY 1999: Various
DELIVERY DATE: FY 1997: Various FY 1998: Various FY 1999: Various

($ in Millions)

Cost:	Prior Years		FY 1995		FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		To Complete		Total	
	Qty	**$**	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
PRIOR YEARS																								
FY 1995 EQUIPMENT					VAR	4.6																	VAR	4.6
FY 1996 EQUIPMENT							VAR	1.9															VAR	1.9
FY 1997 EQUIPMENT									VAR	0.9													VAR	0.9
FY 1998 EQUIPMENT											VAR	7.4											VAR	7.4
FY 1999 EQUIPMENT													VAR	4.1									VAR	4.1
FY 2000 EQUIPMENT															VAR	6.2							VAR	6.2
FY 2001 EQUIPMENT																	VAR	5.0					VAR	5.0
FY 2002 EQUIPMENT																			VAR	6.1			VAR	6.1
FY 2003 EQUIPMENT																					VAR	TBD	VAR	TBD
TO COMPLETE																					VAR	TBD	VAR	TBD

INSTALLATION SCHEDULE: SHIP AVAILABILITIES

	FY 1996 & Prior	FY 1997 1	2	3	4	FY 1998 1	2	3	4	FY 1999 1	2	3	4	FY 2000 1	2	3	4	FY 2001 1	2	3	4	FY 2002 1	2	3	4	FY 2003 1	2	3	4	TC	TOTAL
In	VAR	VAR	VAR	VAR	VAR	VAR	VAR	VAR	VAR	VAR	VAR	VAR	VAR	VAR	VAR	VAR	VAR	VAR	VAR	VAR	VAR	VAR	VAR	VAR	VAR	VAR	VAR	VAR	VAR	VAR	VAR
Out	VAR	VAR	VAR	VAR	VAR	VAR	VAR	VAR	VAR	VAR	VAR	VAR	VAR	VAR	VAR	VAR	VAR	VAR	VAR	VAR	VAR	VAR	VAR	VAR	VAR	VAR	VAR	VAR	VAR	VAR	VAR

CLASSIFICATION: **UNCLASSIFIED**

P3A **INDIVIDUAL MODIFICATION**

MODELS OF SYSTEM AFFECTED: AEGIS WEAPONS SYSTEMS TYPE MODIFICATION: AWS SHIPALTS MODIFICATION TITLE: SHIP ALTERATIONS

DESCRIPTION/JUSTIFICATION:

This program provides for procurement and installations of emerging fact-of-life, and safety modifications to the AEGIS Weapon System (AWS), including alterations which are prerequisite to ASW interoperability/compatability with other systems (TBMD/JTIDS/CEC/Tomahawk). These requirements will continue thorugh the life of the ships. These SHIPALTS vary in scope and will be installed primarily by Alteration Installation teams and Public or Private Shipyards.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

	FY 1994 & Prior		FY 1995		FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$
FINANCIAL PLAN (IN MILLIONS)																								
RDT&E																							0	0.0
PROCUREMENT																								
INSTALLATION KITS																							0	0.0
INSTALLATION KITS NONRECURRING																								0.0
EQUIPMENT							VAR	3.8	VAR	3.6	VAR	2.4	VAR	23.3	VAR	2.5	VAR	13.6	VAR	13.9	VAR	TBD	VAR	TBD
EQUIPMENT NONRECURRING																								0.0
ENGINEERING CHANGE ORDERS																								0.0
DATA																								0.0
TRAINING EQUIPMENT																								0.0
SUPPORT EQUIPMENT																								0.0
OTHER																								0.0
OTHER																								0.0
OTHER																								0.0
INTERIM CONTRACTOR SUPPORT																								0.0
PROCUREMENT COST								3.8		3.6		2.4		23.3		2.5		13.6		13.9		TBD		TBD
INSTALL COST									VAR	1.9	VAR	3.0	VAR	7.6	VAR	6.3	VAR	11.1	VAR	12.4	VAR	TBD	VAR	TBD
TOTAL PROGRAM COST								3.8		5.5		5.4		30.9		8.8		24.7		26.3		TBD		TBD

P3A (Continued) **INDIVIDUAL MODIFICATION (Continued)**

MODELS OF SYSTEMS AFFECTED: **AEGIS WEAPONS SYSTEM** MODIFICATION TITLE: AWS SHIPALTS

INSTALLATION INFORMATION:
METHOD OF IMPLEMENTATION: **Installation will be accomplished primarily by AIT teams.**
ADMINISTRATIVE LEADTIME: Varies Months PRODUCTION LEADTIME: Varies Months
CONTRACT DATES: FY 1997: Various FY 1998: Various FY 1999: Various
DELIVERY DATE: FY 1997: Various FY 1998: Various FY 1999: Various

($ in Millions)

Cost:	Prior Years		FY 1995		FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		To Complete		Total	
	Qty	**$**	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
PRIOR YEARS																								
FY 1995 EQUIPMENT																								
FY 1996 EQUIPMENT																								
FY 1997 EQUIPMENT									VAR	1.9													VAR	1.9
FY 1998 EQUIPMENT											VAR	3.0											VAR	3.0
FY 1999 EQUIPMENT													VAR	7.6									VAR	7.6
FY 2000 EQUIPMENT															VAR	6.3							VAR	6.3
FY 2001 EQUIPMENT																	VAR	11.1					VAR	11.1
FY 2002 EQUIPMENT																			VAR	12.4			VAR	12.4
FY 2003 EQUIPMENT																					VAR	TBD	VAR	TBD
TO COMPLETE																					VAR	TBD	VAR	TBD

INSTALLATION SCHEDULE: SHIP AVAILABILITIES

	FY 1996 & Prior	FY 1997 1	2	3	4	FY 1998 1	2	3	4	FY 1999 1	2	3	4	FY 2000 1	2	3	4	FY 2001 1	2	3	4	FY 2002 1	2	3	4	FY 2003 1	2	3	4	TC	TOTAL
In	0	VAR	VAR	VAR	VAR	VAR	VAR	VAR	VAR	VAR	VAR	VAR	VAR	VAR	VAR	VAR	VAR	VAR	VAR	VAR	VAR	VAR	VAR	VAR	VAR	VAR	VAR	VAR	VAR	VAR	VAR
Out	0	0	VAR	VAR	VAR	VAR	VAR	VAR	VAR	VAR	VAR	VAR	VAR	VAR	VAR	VAR	VAR	VAR	VAR	VAR	VAR	VAR	VAR	VAR	VAR	VAR	VAR	VAR	VAR	VAR	VAR

CLASSIFICATION: **UNCLASSIFIED**

P3A **INDIVIDUAL MODIFICATION**

MODELS OF SYSTEM AFFECTED: AEGIS WEAPONS SYSTEMS TYPE MODIFICATION: SMART SHIP MODIFICATION TITLE: SMART SHIP

DESCRIPTION/JUSTIFICATION:

Funds will be used to backfit selected Smart Ship control systems on AEGIS ships. These technologies include a multi-media resource center, wireless internal commmunications and firefighting equipment.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

	FY 1994 & Prior		FY 1995		FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$
FINANCIAL PLAN (IN MILLIONS)																								
RDT&E																								0.0
PROCUREMENT																								
INSTALLATION KITS																								0.0
INSTALLATION KITS NONRECURRING																								0.0
EQUIPMENT											2	12.8	5	27.1	6	32.8	5	27.9	4	21.5			22	122.1
EQUIPMENT NONRECURRING																								0.0
ENGINEERING CHANGE ORDERS																								0.0
DATA																								0.0
TRAINING EQUIPMENT																								0.0
SUPPORT EQUIPMENT																								0.0
OTHER																								0.0
OTHER																								0.0
OTHER																								0.0
INTERIM CONTRACTOR SUPPORT																								0.0
PROCUREMENT COST											2	12.8	5	27.1	6	32.8	5	27.9	4	21.5			122.1	
INSTALL COST																								0.0
TOTAL PROGRAM COST												12.8		27.1		32.8		27.9		21.5				122.1

BUDGET ITEM JUSTIFICATION SHEET P-40											DATE: February 1998	
APPROPRIATION/BUDGET ACTIVITY **OTHER PROCUREMENT, NAVY** **BA4/Ordnance Support Equipment**							P-1 ITEM NOMENCLATURE Surface Tomahawk Support Equipment (J45A) **(PEO(CU))(BLI: 525000)**					
Program Element for Code B Items: **Not Applicable**							Other Related Program Elements **24229N**					
	Prior Years	ID Code	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total
QUANTITY		A	-	-	-	-	-	-	-	-	-	-
COST (In Millions)	**1011.0**		**58.5**	**83.7**	**58.6**	**90.2**	**$85.0**	**$72.5**	**$53.4**	**$54.3**	-	**$1,567.2**

Afloat Planning System (APS) provides Tomahawk Land Attack Missile (TLAM) mission planning capability to US Navy Battle Force and Battle Group Commanders. Installations are planned for CV/CVNs and five APS support facilities. APS consists of three segments: (a) TLAM Planning system (TPS) which plans conventional TLAM routes; (b) Digital Imagery Workstation Afloat (DIWSA) which processes required imagery data and (c) Tactical Data Distribution System (TDDS) which is the communications link with incoming threat, weather and imagery data, and outgoing TLAM missions sent to Tomahawk platforms. Total IO/Requirements for APS is fifteen.

Advanced Tomahawk Weapons Control System (ATWCS) procures hardware and software reliability, maintainability and safety changes to correct Tomahawk Weapon Systems (TWS) deficiencies, TWS upgrades resulting from RDT&E initiated improvements, operational requirements, Desert Storm lessons learned, fleet systems reviews, and Land Base Test Site (LBTS) testing. This element funds the procurement of ATWCS which provides state-of-the-art open system architecture, greater graphical display, improved interface, increased mission storage capacity, improved flexibility and responsiveness.

Installation of Equipment funds all Fleet Modernization Program (FMP) installation costs associated with ATWCS and all non-FMP installation costs associated with APS and shore-sited units of both systems.

Theater Mission Planning Center (TMPC) Product Improvements procures required software improvements. Tomahawk mission planning is highly dependent on mapping, charting and geodesy products from National Imagery and Mapping Agency (NIMA) and imagery from national systems. Transmitting the missions to Tomahawk capable platforms depends entirely on the Navy communications system which historically is improved and updated on a regular basis, many annually. This funding allows TMPC to retain compatibility with, and exploit capabilities of, these systems.

The FY98 program procures 16 ATWCS units, TMPC product improvements and associated systems support costs. The FY99 program procures 19 ATWCS units, TMPC product improvements and associated systems support costs.

WEAPONS SYSTEM COST ANALYSIS P-5	Weapon System	DATE: February 1998
APPROPRIATION/BUDGET ACTIVITY **Other Procurement, Navy** **BA4/Ordnance Support Equipment**	ID Code	P-1 ITEM NOMENCLATURE/SUBHEAD Surface Tomahawk Support Equipment (J45A) (PEO(CU))(BLI: 525000)

TOTAL COST IN THOUSANDS OF DOLLARS

COST CODE	ELEMENT OF COST	ID Code	Prior Years	FY 1996			FY 1997			FY 1998			FY 1999		
			TOTAL COST	QTY	Unit Cost	TOTAL COST	QTY	Unit Cost	TOTAL COST	QTY	Unit Cost	TOTAL COST	QTY	Unit Cost	TOTAL COST
	Weapon Control System														
03000	Afloat Planning System (APS)		293,311	4	5,233	20,932	2	5,000	10,000			0			0
05000	Production Support		161,702			0			0			0			0
06000	Advanced Tomahawk Weapons Control System (ATWCS)		424,827			26,665			52,327			25,293			29,410
07000	Installation of Equipment (Non-FMP)		20,346			1,440			2,500			1,499			1,327
07001	Installation of Equipment (FMP)		9,548			1,854			2,673			4,367			9,036
08000	Theater Mission Planning Center (TMPC) Product Improvements		101,235			7,584			16,187			27,461			50,436
			1,010,969	**4**		**58,475**	**2**		**83,687**			**58,620**			**90,209**

CLASSIFICATION: **UNCLASSIFIED**

BUDGET PROCUREMENT HISTORY AND PLANNING EXHIBIT (P-5A)	Weapon System	**A. DATE** **February 1998**
B. APPROPRIATION/BUDGET ACTIVITY **Other Procurement, Navy** **BA4/Ordnance Support Equipment**	**C. P-1 ITEM NOMENCLATURE** **Surface Tomahawk Support Equipment (J45A)** **(PEO(CU))(BLI: 525000)**	**SUBHEAD** **J45A**

Cost Element/ FISCAL YEAR	QUANTITY	UNIT COST (000)	LOCATION OF PCO	RFP ISSUE DATE	CONTRACT METHOD & TYPE	CONTRACTOR AND LOCATION	AWARD DATE	DATE OF FIRST DELIVERY	SPECS AVAILABLE NOW	IF YES WHEN AVAILABLE
Afloat Planning System										
03000/FY96	4	5,233	NAVSUP		SS/Option	GD/E, San Diego CA	Jun-96	Aug-97	Yes	
03000/FY97	2	5,000	NAVSUP		SS/Option	GD/E, San Diego CA	Jan-97	Mar-98	Yes	

D. REMARKS

CLASSIFICATION: **UNCLASSIFIED** Feb-98

P3A **INDIVIDUAL MODIFICATION**

MODELS OF SYSTEM AFFECTED: CG/DD/DDG/CV/CVN/LCC/AGF TYPE MODIFICATION: Reliability MODIFICATION TITLE: Advanced Tomahawk Weapons Control System (ATWCS)

DESCRIPTION/JUSTIFICATION:

ATWCS provides state-of-the-art open system architecture, greater graphical display, improved interface, mission storage capacity, flexibility and responsiveness over the previous Tomahawk Weapons Control System configuration.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: In-Production

	FY 1994 & Prior		FY 1995		FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$
FINANCIAL PLAN (IN MILLIONS)																								
RDT&E																							0	0.0
PROCUREMENT																								
INSTALLATION KITS	2	5.2	15	33.2	11	24.1	29	45.6	16	19.2	19	22.8	29	34.8	25	30.0	9	10.8	6	7.2			161	232.9
INSTALLATION KITS - UNIT COST				2.2		2.2		1.6		1.2		1.2		1.2		1.2		1.2		1.2				
INSTALLATION KITS NONRECURRING																								0.0
EQUIPMENT																								0.0
EQUIPMENT NONRECURRING																								0.0
ENGINEERING CHANGE ORDERS																								0.0
DATA																								0.0
TRAINING EQUIPMENT																								0.0
SUPPORT EQUIPMENT																								0.0
OTHER (ENGINEERING SUPPORT)		3.5		12.2		2.6		6.7		6.1		6.6		7.5		6.5		6.9		15.7				74.3
OTHER																								0.0
OTHER																								0.0
INTERIM CONTRACTOR SUPPORT																								0.0
INSTALL COST					3	1.4	16	4.7	19	5.2	34	10.4	20	6.2	29	8.9	25	7.7	9	2.8	6	1.9	161.0	49.2
TOTAL PROCUREMENT	2.0	8.7	15	45.4	11	28.1	29	57.0	16	30.5	19	39.8	29	48.5	25	45.4	9	25.4	6	25.7			161.0	354.5

P3A (Continued) **INDIVIDUAL MODIFICATION (Continued)**

MODELS OF SYSTEMS AFFECTED: **CG/DD/DDG/CV/CVN/LCC/AGF** MODIFICATION TITLE: Advanced Tomahawk Weapons Control System (ATWCS)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: **FMP/Alteration Installation Team (AIT)**

ADMINISTRATIVE LEADTIME: 6 Months PRODUCTION LEADTIME: 12 Months

CONTRACT DATES: FY 1997: **March 1997** FY 1998: **March 1998** FY 1999: **March 1999**

DELIVERY DATE: FY 1997: Multiple FY 1998: Multiple FY 1999: Multiple

($ in Millions)

Cost:		FY 1995		FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		To Complete		Total	
	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
PRIOR YEARS				2	1.0																	2	1.0
FY 1995 EQUIPMENT				1	0.4	14	4.1															15	4.5
FY 1996 EQUIPMENT						2	0.6	9	2.4													11	3.0
FY 1997 EQUIPMENT								10	2.8	19	5.8											29	8.6
FY 1998 EQUIPMENT										15	4.6	1	0.3									16	4.9
FY 1999 EQUIPMENT												19	5.9									19	5.9
FY 2000 EQUIPMENT														29	8.9							29	8.9
FY 2001 EQUIPMENT																25	7.7					25	7.7
FY 2002 EQUIPMENT																		9	2.8			9	2.8
FY 2003 EQUIPMENT																				6	1.9	6	1.9
TO COMPLETE																							

INSTALLATION SCHEDULE:

	FY 1996 & Prior	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001				FY 2002				FY 2003				TC	TOTAL
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		
In	10	3	5	6	3	1	6	6	7	10	4	4	4	4	4	5	5	5	9	8	6	6	9	8	8	4	5	3	3	0	161
Out	5	2	7	4	1	5	8	3	3	10	10	10	4	5	5	6	4	7	8	8	6	7	7	6	5	3	3	2	1	6	161

CLASSIFICATION: **UNCLASSIFIED** **Feb-98**

P3A **INDIVIDUAL MODIFICATION**

MODELS OF SYSTEM AFFECTED: CV/CVN TYPE MODIFICATION: Reliability MODIFICATION TITLE: Afloat Planning System (APS)

DESCRIPTION/JUSTIFICATION:

Afloat Planning System (APS) provides Tomahawk Land Attack Mission (TLAM) mission planning capability to US Navy Battle Force and Battle Group Commanders.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: **In-Production**

	FY 1994 & Prior		FY 1995		FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$
FINANCIAL PLAN (IN MILLIONS)																								
RDT&E																								
PROCUREMENT																								
INSTALLATION KITS	3	13.4	4	16.4	4	19.4	2	8.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	3	12.2	16	69.4
INSTALLATION KITS - UNIT COST				4.1		4.9		4.0																
INSTALLATION KITS NONRECURRING																								0.0
EQUIPMENT																								0.0
EQUIPMENT NONRECURRING																								0.0
ENGINEERING CHANGE ORDERS																								0.0
DATA																								0.0
TRAINING EQUIPMENT																								0.0
SUPPORT EQUIPMENT																								0.0
OTHER (ENGINEERING SUPPORT)		8.5		1.2		1.5		2.0		0.0		0.0		0.0		0.0		0.0		0.0		11.0		24.2
OTHER																								0.0
OTHER																								0.0
INTERIM CONTRACTOR SUPPORT																								0.0
INSTALL COST					7	1.9	4	0.5	2	0.6	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	3	0.7	16.0	3.7
TOTAL PROCUREMENT					4	60.9	2	10.5	0	0.6	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	3	23.9	16.0	95.9

P3A (Continued) **INDIVIDUAL MODIFICATION (Continued)**

MODELS OF SYSTEMS AFFECTED: **CV/CVN** MODIFICATION TITLE: Afloat Planning System (APS)

INSTALLATION INFORMATION:
METHOD OF IMPLEMENTATION: **FMP/Alteration Installation Team (AIT)**
ADMINISTRATIVE LEADTIME: 9 Months PRODUCTION LEADTIME: 14 Months
CONTRACT DATES: FY 1997: **Jan 1997** FY 1998: **N/A** FY 1999: **N/A**
DELIVERY DATE: FY 1997: Mar 1997 FY 1998: **N/A** FY 1999: **N/A**

($ in Millions)

Cost:	Prior Years		FY 1995		FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		To Complete		Total	
	Qty	**$**	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
PRIOR YEARS					**3**	**0.8**																	3	0.8
FY 1995 EQUIPMENT					**4**	**1.1**																	4	1.1
FY 1996 EQUIPMENT							4	**0.5**															4	0.5
FY 1997 EQUIPMENT									2	**0.6**													2	0.6
FY 1998 EQUIPMENT											0	**0.0**											0	0.0
FY 1999 EQUIPMENT													0	**0.0**									0	0.0
FY 2000 EQUIPMENT															0	**0.0**							0	0.0
FY 2001 EQUIPMENT																	0	**0.0**					0	0.0
FY 2002 EQUIPMENT																			0	0.0			0	0.0
FY 2003 EQUIPMENT																					0	0.0	0	0.0
TO COMPLETE																					3	0.7	3	0.7

INSTALLATION SCHEDULE:

	FY 1996 & Prior	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001				FY 2002				FY 2003				TC	TOTAL
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		
In	7	0	0	4	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	16
Out	7	0	0	4	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	16

BUDGET ITEM JUSTIFICATION SHEET
P-40

DATE: **February 1998**

APPROPRIATION/BUDGET ACTIVITY
OTHER PROCUREMENT, NAVY
BA4/Ordnance Support Equipment

P-1 ITEM NOMENCLATURE
Submarine Tomahawk Support Equipment (J45B)
(PEO(CU))(BLI: 525500)

Program Element for Code B Items:
N/A

Other Related Program Elements
NONE

	Prior Years	ID Code	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total
QUANTITY	-	A	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
COST (In Millions)	111.7		**$1.3**	**$0.0**	**$1.4**	**$4.0**	**$6.4**	**$5.9**	**$8.8**	**$7.4**	**-**	**$146.9**

Submarine-Advanced Tomahawk Weapon Control System (Sub-ATWCS) provides open system architecture, extensive hardware (TAC-X) processors, Common Display Console Unit, racks, cables connectors, etc.), and software commonality with surface systems. Sub-ATWCS is a prerequisite for the Tomahawk Baseline Improvement Program in submarines.

The FY 1998 and FY 1999 programs procure necessary hardware to accommodate commonality and interface requirements between Sub-ATWCS and the CCS-MK2 Fire Control Systems for Tomahawk capable class submarines. The increased funding during FY 1999 and out reflects the need to procure in greater numbers the multiple items of equipment identified above based on a time-phased requirements schedule.

CLASSIFICATION: **UNCLASSIFIED**

WEAPONS SYSTEM COST ANALYSIS P-5	Weapon System	DATE: **February 1998**
APPROPRIATION/BUDGET ACTIVITY **Other Procurement, Navy** **BA4/Ordnance Support Equipment**	ID Code	P-1 ITEM NOMENCLATURE/SUBHEAD Submarine Tomahawk Support Equipment (J45B) (PEO(CU))(BLI: 525500)

COST CODE	ELEMENT OF COST	ID Code	Prior Years	FY 1996			FY 1997			FY 1998			FY 1999		
			TOTAL COST	QTY	Unit Cost	TOTAL COST	QTY	Unit Cost	TOTAL COST	QTY	Unit Cost	TOTAL COST	QTY	Unit Cost	TOTAL COST
02000	Submarine-ATWCS		111,749			1,347			0	2	696	1,392	5	792	3,961
				0		**1,347**	**0**		**0**	**2**	**696.0**	**1,392**	**5**	**792.2**	**3,961**

DD FORM 2446, JUN 86 P-1 SHOPPING LIST CLASSIFICATION:

UNCLASSIFIED

BUDGET ITEM JUSTIFICATION SHEET P-40													DATE: February 1998
APPROPRIATION/BUDGET ACTIVITY OTHER PROCUREMENT, NAVY BA-4 ORDNANCE SUPPORT EQUIPMENT								P-1 ITEM NOMENCLATURE/LINE ITEM # SSN 688 CLASS VERTICAL LAUNCH SYSTEM/845A BLI # 5260					
Program Element for Code B Items:								OTHER RELATED PROGRM ELEMENTS					
	Prior Years	ID Code	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total
QUANTITY					N/A	N/A	N/A	N/A	N/A	N/A	N/A		0
EQUIPMENT COST (In Millions)		A	N/A	N/A	$12.6	$7.4	$7.8	$7.8	$7.6	$7.5	$6.7		$57.9
SPARES COST (In Millions)			N/A	N/A	$0.3	$0.8	$0.8	$0.8	$0.7	$0.7	$0.8		5

PROGRAM DESCRIPTION/JUSTIFICATION:

SUBMARINES

The SSN-688 Class Vertical Launch System (VLS) is a weapons system which provides the SSN-688 Class submarines with the capability to carry, status, preset, and launch up to twelve TOMAHAWK cruise missiles from vertical tubes located in the forward non-pressure hull area. This weapons system is being added to all SSN-688 Class submarines starting with SSN-719 in FY 86 with out degrading any existing SSN-688 Class weapons system capabilities or submarine operational characteristics. The VLS can launch two different types of TOMAHAWK cruise missiles: conventional land attack and conventional anti-ship. The TOMAHAWK cruise missile was modified to allow operation in a vertical orientation. VLS is being procured and installed under the SCN appropriation. VLS support, test, and handling equipment are provided by this OPN P-1 line item.

The AUR Simulator is a test and training device that is loaded into a missile tube to simulate an operational Encapsulated TOMAHAWK Vertical All Up Round (AUR) allowing the VLS to be exercised through the launch phase without actually launching a missile. The AUR Simulator consists of an AUR Electronic Simulator enclosed in a Volumetric Shape. The AUR Electronic Simulator (AURES) simulates the AUR operations either while installed in the Volumetric Shape or in the stand-alone mode via electrical umbilical connection. The Volumetric Shape simulates the weight and shape of an operational AUR, provides a watertight, pressure-proof enclosure for the AURES, and interfaces with the missile tube in a manner similar to an operational AUR so that no damage to the tube will occur during simulation. The missile tube bore gauge is used to verify the proper missile tube clear bore to ensure compatibility with the TOMAHAWK AUR. The AUR loader is a funnel-shaped device which mounts to the missile tube muzzle face. It acts as a guide for the AUR and provides the mechanism to push the AUR down during loading and pull the AUR out of the missile tube during unloading. The Missile Tube Control Panel (MTCP) displays the status of the missile tubes, controls the operation of the missile tube hatches, and displays the status of various subsystems.

The SSN 688 Class VLS project has new and emergent requirements since POM98 was issued. The Submarine Tomahawk Action Board (STAB) imposed the following requirements (these are shown in the PR99 submission): parallel Hatch Open /ITL magnetic switches to improve reliability; increased Peculiar Support Equipment (PSE: Volumetric Shapes and Ballast Cans) requirements; increased MK101 Load Bank requirements; MK101 fault insertion kits; Training System Requirements Analysis (TSRA) training tubes.
In addition emergent needs imposed the following requirements (these are shown in the PR99 submission: 5VDC power supply fix; Tube Control Panel (TCP) maintenance module; MFD 3/9 Position Indicator Stabilizer; modified gagging pins; Missile Tube Control Panel (MTCP) Drain Inhibit Fix). To fund these new requirements and maintain existing controls in each FY, the following existing requirements have been deleted/modified: STAB deleted the requirement for the Launch Platform Testers (LPT) in favor of Inert Operational Missiles (IOM) and/or Guidance Test Sets to be funded by other projects; the need for the MTCP Differential Pressure Transducer (DPT) calibration mod has been deleted since the VLS Interface Control Document (ICD) has widened the in-band pressure limits to increase launch reliability; some ShipAlt material procurement has been stretched to fund STAB and emergent need requirements, which has resulted in fewer installations (and thus available funds) in the FY following the procurement slip.

BUDGET ITEM JUSTIFICATION SHEET P-40	DATE: February 1998
APPROPRIATION/BUDGET ACTIVITY OTHER PROCUREMENT, NAVY BA-4	P-1 ITEM NOMENCLATURE/LINE ITEM # *VERTICAL LAUNCH SURFACE SYSTEM/5260*

PROGRAM DESCRIPTION/JUSTIFICATION:

SURFACE

VERTICAL LAUNCHING SYSTEM - The Vertical Launching System (VLS) is a missile launching system for surface combatants, capable of launching missiles for all warfare areas and adaptable to present and future weapons control systems. OPN funds are for procurement of SPRUANCE (DD 963) Class ship sets (one 61-cell VLS launcher). Each VLS launcher holds 61 missiles with complete flexibility in missile loadout; any missile type adapted for Vertical Launch can be loaded/fired in any cell. Thus, any mix of TOMAHAWK Land-attack or Anti-ship missiles can be carried. This flexibility of loadout allows the ship's mission to be specifically tailored to its current operational requirements. The TOMAHAWK missiles are controlled by the TOMAHAWK Weapons Control System. The modular design of the VLS makes each module essentially a stand-alone missile launching system, greatly increasing system reliability and availability.

VLS ORDALTS - Improvements/ changes required to resolve problems aboard the operational ships of the DD963, CG-47 and DDG-51 Class .

Present requirements are to support two 61-cell launchers for CG-47 Class ships, one launcher for DD-963 Class ships, and one 61-cell and one 29-cell launcher for DDG-51 Class ships. Delivery of the VLS commenced in FY 85 for the CG-47 Class ships, in FY 86 for the DD-963 Class ships and in FY 87 for the DDG-51 Class Ships.

WEAPONS SYSTEM COST ANALYSIS P-5					Weapon System			DATE: February 1998					
APPROPRIATION/BUDGET ACTIVITY OTHER PROCUREMENT, NAVY BA-4 ORDNANCE SUPPORT EQUIPMENT					ID Code	P-1 ITEM NOMENCLATURE/SUBHEAD SSN 688 CLASS VERTICAL LAUNCH SYSTEM/845A BLI # 5260							
COST CODE	ELEMENT OF COST	ID Code	TOTAL COST IN THOUSANDS OF DOLLARS										
						FY 1997			FY 1998			FY 1999	
			QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST
	SUBMARINES N-87												
5A102	AUR ELECTRONIC SIMULATOR	A											
	(AURES) MK-101												
	Remote Weapons Sel Kits					12	14.6	175	35	14.7	537	10	15.0	150
	Blk IV Kit								3	180.3	541	10	5.0	50
	Fault insertion kit nonconcurrent w/RWS					1	200.0	200	9	10.0	90			
	Fault insertion kit concurrent w/RWS								15	2.0	30			
	Load Bank								15	7.0	100			
5A107	LOADING SUPPORT EQUIPMENT	A												
	Non PSE support equipment											5	133.6	668
	TSRA Support Equipment													
	Training Tube					1	500.0	500	1	506.0	506			
	STAB Support Equipment													
	IOM Extension Cable					6	11.0	66						
	HYDROSTATIC Tester											2	30.0	60
5A116	FACILITY HARDWARE	A						40						398
5A118	SHIPALT MATERIAL	A												
	Self Lubricated Bearings					4	65.0	260						
	Tube Control Panel Upgrade					6	200.0	1200	3	205.0	615	4	222.0	888
	Access Plates								1	40.0	40			
	Tube Control Panel 5VDC PS Fix											1	75.0	75
	TCP Follow-on Upgrade													
	TCP Maintenance Module											1	175.0	175
	MFD 3/9 Pos Ind Stabilizer					7	2.1	15	3	2.7	8			
	Parallel HO/ITL Mag Sw					9	35.8	322	15	36.5	547	8	37.0	296
	Gagging Pins					1	100.0	100						
	MTCP Drain Inhibit Fix											8	15.0	120
	MATERIAL TOTAL	A						$2,878			$3,014			$2,880
5AINS	FMP INSTALLATIONS							1474			1722			915
	INSTALLATION TOTAL							$1,474			$1,722			$915
TOTAL								$4,352			$4,736			$3,795

WEAPONS SYSTEM COST ANALYSIS P-5			Weapon System	DATE: February 1998
APPROPRIATION/BUDGET ACTIVITY: Other Procurement, Navy		ID Code: A	P-1 ITEM NOMENCLATURE/SUBHEAD: VERTICAL LAUNCH SURFACE SYSTEM/145A	

COST CODE	ELEMENT OF COST	ID Code	TOTAL COST IN THOUSANDS OF DOLLARS											
						FY 1997			FY 1998			FY 1999		
			QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST
	SURFACE N86													
5A003	VLS ORDALTS							3,838			1,362			2,369
5A830	PRODUCTION ENGINEERING							749			664			730
5A870	SPEC TOOLING/TEST EQUIP							517			141			0
5A900	CONSULTING SERVICES							281			48			60
5A5IN	FMP INSTALLATION							2,862			437			837
TOTAL								**8,247**			**2,652**			**3,996**

BUDGET PROCUREMENT HISTORY AND PLANNING EXHIBIT (P-5A)	Weapon System	A. DATE February 1998
B. APPROPRIATION/BUDGET ACTIVITY OTHER PROCUREMENT, NAVY BA-4 ORDNANCE SUPPORT EQUIPMENT	C. P-1 ITEM NOMENCLATURE SSN 688 CLASS VERTICAL LAUNCH SYSTEM 5A102 AUR ELECTRONIC	SUBHEAD 845A

Cost Element/ FISCAL YEAR	QTY	UNIT COST (000)	LOCATION OF PCO	RFP ISSUE DATE	CONTRACT METHOD & TYPE	CONTRACTOR AND LOCATION	AWARD DATE	DATE OF FIRST DELIVERY	SPECS AVAILABLE NOW	IF NO WHEN AVAILABLE
FY1997										
Remote Weapons										
Sel Kits	12	$15	NUWC		COMPET	COMPETITIVE/NUWC	11/96	4/97	YES	N/A
Block IV kit	1	$200	NUWC		COMPET	COMPETITIVE/NUWC	11/96	4/97	YES	N/A
FY1998										
Remote Weapons										
Sel Kits	35	$15	NUWC		COMPET	COMPETITIVE/NUWC	11/97	4/98	YES	N/A
Blk IV Kit	3	$180	NUWC		COMPET	COMPETITIVE/NUWC	11/97	4/98	YES	N/A
Fault Insertion Kit nonconcurrent w/RWS	9	$10	NUWC		COMPET	COMPETITIVE/NUWC	11/97	4/98	YES	N/A
Fault Insertion Kit concurrent w/RWS	15	$2	NUWC		COMPET	COMPETITIVE/NUWC	11/97	4/98	YES	N/A
Load Bank	15	$7	NUWC		COMPET	COMPETITIVE/NUWC	11/97	4/98	YES	N/A
FY1999										
Remote Weapons										
Sel Kits	10	$15	NUWC		COMPET	COMPETITIVE/NUWC	11/98	4/99	YES	N/A
Blk IV Kit	10	$5	NUWC		COMPET	COMPETITIVE/NUWC	11/98	4/99	YES	N/A

BUDGET PROCUREMENT HISTORY AND PLANNING EXHIBIT (P-5A)	Weapon System	A. DATE February 1998
B. APPROPRIATION/BUDGET ACTIVITY OTHER PROCUREMENT, NAVY BA-4 ORDNANCE SUPPORT EQUIPMENT	C. P-1 ITEM NOMENCLATURE SSN 688 CLASS VERTICAL LAUNCH SYSTEM 5A107 LOADING SUPPORT EQUIPMENT	SUBHEAD 845A

Cost Element/ FISCAL YEAR	QTY	UNIT COST (000)	LOCATION OF PCO	RFP ISSUE DATE	CONTRACT METHOD & TYPE	CONTRACTOR AND LOCATION	AWARD DATE	DATE OF FIRST DELIVERY	SPECS AVAILABLE NOW	IF NO WHEN AVAILABLE
FY1997										
Training Tube	1	$500	NNS		COMPET	COMPETITIVE/NNS	11/96	9/97	YES	N/A
IOM Extension Cable	6	$11	LCE		COMPET	COMPETITIVE/LCE	1/97	2/97	YES	N/A
FY1998										
Training Tube	1	$506	NNS		COMPET	COMPETITIVE/NNS	11/97	9/98	YES	N/A
FY1999										
Non-PSE Support Kit	5	$136	NUWC		COMPET	COMPETITIVE/NUWC	11/98	4/99	YES	N/A
Hydrostatic Tester	2	$30	LCE		COMPET	COMPETITIVE/LCE	11/98	4/99	YES	N/A

BUDGET PROCUREMENT HISTORY AND PLANNING EXHIBIT (P-5A)	Weapon System	A. DATE February 1998
B. APPROPRIATION/BUDGET ACTIVITY OTHER PROCUREMENT, NAVY BA-4 ORDNANCE SUPPORT EQUIPMENT	C. P-1 ITEM NOMENCLATURE SSN 688 CLASS VERTICAL LAUNCH SYSTEM 5A118 SHIPALT MATERIAL	SUBHEAD 845A

Cost Element/ FISCAL YEAR	QTY	UNIT COST (000)	LOCATION OF PCO	RFP ISSUE DATE	CONTRACT METHOD & TYPE	CONTRACTOR AND LOCATION	AWARD DATE	DATE OF FIRST DELIVERY	SPECS AVAILABLE NOW	IF NO WHEN AVAILABLE
FY1997										
Self Lubricated Bearings	4	$65	NUWC		COMPET	COMPETITIVE/NUWC	11/96	4/97	YES	N/A
Tube Control Panel	6	$200	NUWC		COMPET	COMPETITIVE/NUWC	11/96	4/97	YES	N/A
MFD 3/9 Pos Ind Stabiliz	7	$2	NSWC		COMPET	COMPETITIVE/NSWC	11/96	9/97	YES	N/A
Parallel HO/ITL Mag Sw	9	$36	NUWC		COMPET	COMPETITIVE/NUWC	11/96	9/97	YES	N/A
Gagging Pin	1	$100	NUWC		COMPET	COMPETITIVE/NUWC	6/97	9/97	YES	N/A
FY1998										
Tube Control Panel	3	$205	NUWC		COMPET	COMPETITIVE/NUWC	11/97	4/98	YES	N/A
Access Plates	1	$40	NNS		COMPET	COMPETITIVE/NNS	11/97	4/98	YES	N/A
MFD 3/9 Pos Ind Stabiliz	3	$3	NSWC		COMPET	COMPETITIVE/NSWC	11/97	4/98	YES	N/A
Parallel HO/ITL Mag Sw	15	$36	NUWC		COMPET	COMPETITIVE/NUWC	11/97	4/98	YES	N/A
FY1999										
Tube Control Panel	4	$222	NUWC		COMPET	COMPETITIVE/NUWC	11/98	4/99	YES	N/A
TCP 5VDC PS Fix	1	$75	NUWC		COMPET	COMPETITIVE/NUWC	11/98	4/99	YES	N/A
TCP Maint Module	1	$175	NUWC		COMPET	COMPETITIVE/NUWC	11/98	4/99	YES	N/A
Parallel HO/ITL Mag Sw	8	$37	NUWC		COMPET	COMPETITIVE/NUWC	11/98	4/99	YES	N/A
MTCP Drain Inhibit Fix	8	$15	NUWC		COMPET	COMPETITIVE/NUWC	11/98	4/99	YES	N/A

CLASSIFICATION: **UNCLASSIFIED**

P3A **INDIVIDUAL MODIFICATION**

MODELS OF SYSTEM AFFECTED: MK-41 Vertical Launach Surface System TYPE MODIFICATION: MK-41 Vertical Launching Systems MODIFICATION TITLE: MK-41 Vertical Launching Systems ORDALTS

DESCRIPTION/JUSTIFICATION:

Various ORALTS for providing launch capability for newer missile variants as well as greataer reliability, operability and maintainability.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

	FY 1994 & Prior		FY 1995		FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$
FINANCIAL PLAN (IN MILLIONS)																								
RDT&E																							0	0.0
PROCUREMENT																								
INSTALLATION KITS																							0	0.0
INSTALLATION KITS NONRECURRING																								0.0
EQUIPMENT	var	4.4	var	0.4	var	2.3	var	3.8	var	1.4	var	2.4	var	1.2	var	2.5	var	0.4	var	0.1	var	continuing	var	18.9
EQUIPMENT NONRECURRING																								0.0
ENGINEERING CHANGE ORDERS																								0.0
DATA																								0.0
TRAINING EQUIPMENT																								0.0
SUPPORT EQUIPMENT																								0.0
OTHER																								0.0
OTHER TOOLING/TEST EQUIP						0.2		0.5		0.1														0.8
OTHER PRODUCTION						1.5		0.8		0.7		0.8		0.3		0.3		0.1		0.03				4.5
INTERIM CONTRACTOR SUPPORT						0.30		0.30		0.06		0.06		0.06		0.06		0.06		0.02				0.9
PROCUREMENT COST		4.4		0.4		4.3		5.4		2.3		3.3		1.6		2.9		0.6		0.2				25.1
INSTALL COST		0.0		0.0		1.1		2.9		0.4		0.9		0.8		1.2		0.6		0.3		continuing		8.2
TOTAL PROGRAM		4.4		0.4		5.4		8.2		2.7		4.1		2.4		4.1		1.1		0.5				33.3

P3A (Continued) **INDIVIDUAL MODIFICATION (Continued)**

MODELS OF SYSTEMS AFFECTED: **DD963, CG-47 and DDG-51 Class** MODIFICATION TITLE: MK-41 Vertical Launching Systems

INSTALLATION INFORMATION:
METHOD OF IMPLEMENTATION: **AIT**
ADMINISTRATIVE LEADTIME: 6 Months PRODUCTION LEADTIME: 18 Months
CONTRACT DATES: FY 1997: **various** FY 1998: **various** FY 1999: **various**
DELIVERY DATE: FY 1997: **various** FY 1998: **various** FY 1999: **various**

($ in Millions)

Cost:	Prior Years		FY 1995		FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		To Complete		Total	
	Qty	**$**	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
PRIOR YEARS	var	4.4			var	1.1																		
FY 1995 EQUIPMENT							var	2.9																
FY 1996 EQUIPMENT									var	0.4														
FY 1997 EQUIPMENT											var	0.9												
FY 1998 EQUIPMENT													var	0.8										
FY 1999 EQUIPMENT															var	1.2								
FY 2000 EQUIPMENT																	var	0.6						
FY 2001 EQUIPMENT																			var	0.3				
FY 2002 EQUIPMENT																					var	continuing		
FY 2003 EQUIPMENT																								
TO COMPLETE																								

INSTALLATION SCHEDULE: Input=Delivery to the Facility, Output=Facility providing to Fleet, ready for issue

	FY 1996 & Prior	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001				FY 2002				FY 2003				TC	TOTAL
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		
In	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Out	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

CLASSIFICATION: **UNCLASSIFIED**

P3A **INDIVIDUAL MODIFICATION**

MODELS OF SYSTEM AFFECTED: SSN 719-725, 750,765,767 TYPE MODIFICATION: K SHIPALT MODIFICATION TITLE: SELF LUBRICATED BEARINGS SHIPALT SSN 3936K (5A118)

DESCRIPTION/JUSTIFICATION:

THIS MOD FIXED STUCK HATCHES DURING CYCLING AND MISSLE LAUNCH WITHOUT NEED FOR GREASING
KITS AND INSTALLATION FOR SSN 766 AND SSN 768 - 773 WERE FUNDED VIA SCN.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

	FY 1994 & Prior		FY 1995		FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$
FINANCIAL PLAN (IN MILLIONS)																								
RDT&E																								
PROCUREMENT																								
INSTALLATION KITS																								
INSTALLATION KITS NONRECURRING																								
EQUIPMENT	9	0.449	8	0.424	3	0.135	4	0.260															24	1.268
EQUIPMENT NONRECURRING																								
ENGINEERING CHANGE ORDERS																								
DATA																								
TRAINING EQUIPMENT																								
SUPPORT EQUIPMENT																								
OTHER																								
OTHER																								
OTHER																								
INTERIM CONTRACTOR SUPPORT																								
PROCUREMENT COST	9	0.449	8	0.424	3	0.135	4	0.260															24	1.268
INSTALL COST			3	0.450	9	1.300	6	0.849	3	0.510	3	0.510											24	3.619
TOTAL PROGRAM		0.449		0.874		1.435		1.109		0.510		0.510												4.887

P3A (Continued) **INDIVIDUAL MODIFICATION (Continued)**

MODELS OF SYSTEMS AFFECTED: SSN 719-725, 750-773 MODIFICATION TITLE: SELF LUBRICATED BEARINGS SHIPALT SSN 3936K (5A118)

INSTALLATION INFORMATION:
METHOD OF IMPLEMENTATION: AIT
ADMINISTRATIVE LEADTIME: 8 Months PRODUCTION LEADTIME: 12 Months
CONTRACT DATES: FY 1997: 4/96 FY 1998: 4/97 FY 1999: 4/98
DELIVERY DATE: FY 1997: 2/97 FY 1998: 2/98 FY 1999: 2/99

($ in Millions)

Cost:	Prior Years		FY 1995		FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
PRIOR YEARS			3	0.450	6	0.867																	9	1.317
FY 1995 EQUIPMENT					3	0.433	5	0.708															8	1.141
FY 1996 EQUIPMENT							1	0.141	2	0.340													3	0.481
FY 1997 EQUIPMENT									1	0.170	3	0.510											4	0.680
FY 1998 EQUIPMENT																								
FY 1999 EQUIPMENT																								
FY 2000 EQUIPMENT																								
FY 2001 EQUIPMENT																								
FY 2002 EQUIPMENT																								
FY 2003 EQUIPMENT																								
TO COMPLETE																								

INSTALLATION SCHEDULE: SHIP AVAILABILITIES

	FY 1996 & Prior	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001				FY 2002				FY 2003				TC	TOTAL
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		
In	12	4	1	1	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24
Out	12	0	2	1	3	0	1	1	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24

CLASSIFICATION: **UNCLASSIFIED**

P3A **INDIVIDUAL MODIFICATION**

MODELS OF SYSTEM AFFECTED: SSN 751 - 773 PLUS TWO SHORE SITES TYPE MODIFICATION: _____ MODIFICATION TITLE: TUBE CONTROL PANEL UPGRADE SHIPALT SSN 3939 (5A118)

DESCRIPTION/JUSTIFICATION:

THIS MOD FIXED THE FOLLOWING DEFICIENCIES: RESPONSE TIME DELAY; UNNECESSARY AUDIBLE ALARM WHILE TUBE IS EMPTY; POOR ACCESS TO AIR FILTERS; INABILITY TO KEEP AUR INTERNAL DIFFERENTIAL PRESSURE WITHIN SPECIFIED RANGE: DISPLAY OF DIFERNTIAL PRESSURE ONLY WHEN SYSTEM IS IN "OPERATE" MODE

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

	FY 1994 & Prior		FY 1995		FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$
FINANCIAL PLAN (IN MILLIONS)																								
RDT&E																								
PROCUREMENT																								
INSTALLATION KITS																								
INSTALLATION KITS NONRECURRING																								
EQUIPMENT			6	1.882	6	1.937	6	1.200	3	0.615	4	0.888											25	6.522
EQUIPMENT NONRECURRING																								
ENGINEERING CHANGE ORDERS																								
DATA																								
TRAINING EQUIPMENT																								
SUPPORT EQUIPMENT																								
OTHER																								
OTHER																								
OTHER																								
INTERIM CONTRACTOR SUPPORT																								
PROCUREMENT COST			6	1.882	6	1.937	6	1.200	3	0.615	4	0.888											25	6.522
INSTALL COST					2	0.436	10	1.163	6	0.750	3	0.405	4	0.600									25	3.354
TOTAL PROCUREMENT				1.882		2.373		2.363		1.365		1.293		0.600										9.876

P3A (Continued) **INDIVIDUAL MODIFICATION (Continued)**

MODELS OF SYSTEMS AFFECTED: SSN 751-773 PLUS TWO SHORE SITES MODIFICATION TITLE: TUBE CONTROL PANEL UPGRADE SHIPALT SSN 3939 (5A118)

INSTALLATION INFORMATION:
METHOD OF IMPLEMENTATION: AIT
ADMINISTRATIVE LEADTIME: 8 Months PRODUCTION LEADTIME: 12 Months
CONTRACT DATES: FY 1997: FY 1998: FY 1999:
DELIVERY DATE: FY 1997: FY 1998: FY 1999:

($ in Millions)

Cost:	Prior Years		FY 1995		FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
PRIOR YEARS																								
FY 1995 EQUIPMENT					2	0.436	4	0.465															6	0.901
FY 1996 EQUIPMENT							6	0.698															6	0.698
FY 1997 EQUIPMENT									6	0.750													6	0.750
FY 1998 EQUIPMENT											3	0.405											3	0.405
FY 1999 EQUIPMENT													4	0.600									4	0.600
FY 2000 EQUIPMENT																								
FY 2001 EQUIPMENT																								
FY 2002 EQUIPMENT																								
FY 2003 EQUIPMENT																								
TO COMPLETE																								

INSTALLATION SCHEDULE: SHIP AVAILABILITIES

	FY 1996 & Prior	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001				FY 2002				FY 2003				TC	TOTAL
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		
In	4	0	2	3	3	4	2	0	0	4	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25
Out	4	0	2	3	3	1	1	2	2	1	1	2	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25

CLASSIFICATION: **UNCLASSIFIED**

P3A **INDIVIDUAL MODIFICATION**

MODELS OF SYSTEM AFFECTED: APPROX 5 to 8 SHIPS AMONG SSN719-725 TYPE MODIFICATION: K SHIPALT MODIFICATION TITLE: INSTALL HULL ACCESS PLATES OUTBOARD OF MISSILE TUBES 15 AND 16 SHIPALT SSN 3989K (5A118)

DESCRIPTION/JUSTIFICATION:

THIS MOD INSTALLS ACCESS PLATES TO FACILITATE MAINTENANCE. MOST SHIPS HAD THE MOD ACCOMPLISHED VIA SCN BUT EXACT QUANTITY WAS IN DOUBT. fUNDING WILL BE FORWARDED TO THE SSN 688 CLASS PLANNING YARD.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

	FY 1994 & Prior		FY 1995		FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$
FINANCIAL PLAN (IN MILLIONS)																								
RDT&E																								
PROCUREMENT																								
INSTALLATION KITS																								
INSTALLATION KITS NONRECURRING																								
EQUIPMENT									1	0.040			7	0.110	7	0.116	7	0.120	9	0.158			31	0.544
EQUIPMENT NONRECURRING																								
ENGINEERING CHANGE ORDERS																								
DATA																								
TRAINING EQUIPMENT																								
SUPPORT EQUIPMENT																								
OTHER																								
OTHER																								
OTHER																								
INTERIM CONTRACTOR SUPPORT																								
PROCUREMENT COST									1	0.040			7	0.110	7	0.116	7	0.120	9	0.158			31	0.544
INSTALL COST													1	0.046	7	0.235	7	0.230	7	0.217	9	0.324	31	1.052
TOTAL PROGRAM										0.040				0.156		0.351		0.350		0.375		0.324		1.596

P3A (Continued) **INDIVIDUAL MODIFICATION (Continued)**

MODELS OF SYSTEMS AFFECTED: APPROX 5 to 8 SHIPS AMONG SSN719-725, 750-77 MODIFICATION TITLE: INSTALL HULL ACCESS PLATES OUTBOARD OF MISSILE TUBES 15 AND 16 SHIPALT SSN 3989K (5A118)

INSTALLATION INFORMATION:
METHOD OF IMPLEMENTATION: AIT
ADMINISTRATIVE LEADTIME: 6 Months PRODUCTION LEADTIME: 5 Months
CONTRACT DATES: FY 1997: FY 1998: 11/97 FY 1999:
DELIVERY DATE: FY 1997: FY 1998: 4/98 FY 1999:

($ in Millions)

Cost:	Prior Years		FY 1995		FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
PRIOR YEARS																								
FY 1995 EQUIPMENT																								
FY 1996 EQUIPMENT																								
FY 1997 EQUIPMENT																								
FY 1998 EQUIPMENT									1	0.040													1	0.040
FY 1999 EQUIPMENT																								
FY 2000 EQUIPMENT															7	0.235							7	0.235
FY 2001 EQUIPMENT																	7	0.230					7	0.230
FY 2002 EQUIPMENT																			7	0.217			7	0.217
FY 2003 EQUIPMENT																			9	0.324			9	0.324
TO COMPLETE																								

INSTALLATION SCHEDULE: SHIP AVAILABILITIES

	FY 1996 & Prior	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001				FY 2002				FY 2003				TC	TOTAL
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		
In		0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	4	3	0	0	4	2	0	0	4	3	0	0	9	31
Out		0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	1	2	2	2	1	2	2	1	1	2	2	2	9	31

CLASSIFICATION: **UNCLASSIFIED**

P3A **INDIVIDUAL MODIFICATION**

MODELS OF SYSTEM AFFECTED: SSN 719-725, 750 TYPE MODIFICATION: FIELD CHANGE MODIFICATION TITLE: MISSLE TUBE CONTROL PANEL DRAIN INHIBIT FIX (5A118)

DESCRIPTION/JUSTIFICATION:

THIS MOD ALLOWS OPERATION OF THE OTHER TUBES IN A BANK WHEN A TUBE'S DIFFERENTIAL PRESSURE TRANSDUCER PRESSURE SWITCH FAILS.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

	FY 1994 & Prior		FY 1995		FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$
FINANCIAL PLAN (IN MILLIONS)																								
RDT&E																								
PROCUREMENT																								
INSTALLATION KITS																								
INSTALLATION KITS NONRECURRING																								
EQUIPMENT											8	0.120											8	0.120
EQUIPMENT NONRECURRING																								
ENGINEERING CHANGE ORDERS																								
DATA																								
TRAINING EQUIPMENT																								
SUPPORT EQUIPMENT																								
OTHER																								
OTHER																								
OTHER																								
INTERIM CONTRACTOR SUPPORT																								
PROCUREMENT COST											8	0.120											8	0.120
INSTALL COST													4	0.120	4	0.132							8	0.252
TOTAL PROGRAM												0.120		0.120		0.132								0.372

P3A (Continued) **INDIVIDUAL MODIFICATION (Continued)**

MODELS OF SYSTEMS AFFECTED: SSN 719-725, 750 MODIFICATION TITLE: MISSLE TUBE CONTROL PANEL DRAIN INHIBIT FIX (5A118)

INSTALLATION INFORMATION:
METHOD OF IMPLEMENTATION: AIT
ADMINISTRATIVE LEADTIME: 6 Months PRODUCTION LEADTIME: 8 Months
CONTRACT DATES: FY 1997: FY 1998: FY 1999:
DELIVERY DATE: FY 1997: FY 1998: FY 1999:

($ in Millions)

Cost:	Prior Years		FY 1995		FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		To Complete		Total	
	Qty	**$**	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
PRIOR YEARS																								
FY 1995 EQUIPMENT																								
FY 1996 EQUIPMENT																								
FY 1997 EQUIPMENT																								
FY 1998 EQUIPMENT																								
FY 1999 EQUIPMENT													4	0.120	4	0.132							8	0.252
FY 2000 EQUIPMENT																								
FY 2001 EQUIPMENT																								
FY 2002 EQUIPMENT																								
FY 2003 EQUIPMENT																								
TO COMPLETE																								

INSTALLATION SCHEDULE: SHIP AVAILABILITIES

	FY 1996 & Prior	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001				FY 2002				FY 2003				TC	TOTAL
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		
In	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	8
Out	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	8

CLASSIFICATION: **UNCLASSIFIED**

P3A **INDIVIDUAL MODIFICATION**

MODELS OF SYSTEM AFFECTED: SSN 751,752,754,755,757,760-763,771 TYPE MODIFICATION: FIELD CHANGE MODIFICATION TITLE: TCP 5VDC POWER SUPPLY

DESCRIPTION/JUSTIFICATION:

MOD FIXED A GROUNDING PROBLEM ON EB DIV - BUILT SHIPS SSN 751 AND LATER

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

	FY 1994 & Prior		FY 1995		FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$
FINANCIAL PLAN (IN MILLIONS)																								
RDT&E																								
PROCUREMENT																								
INSTALLATION KITS																								
INSTALLATION KITS NONRECURRING																								
EQUIPMENT											1	0.075	10	0.200									11	0.275
EQUIPMENT NONRECURRING																								
ENGINEERING CHANGE ORDERS																								
DATA																								
TRAINING EQUIPMENT																								
SUPPORT EQUIPMENT																								
OTHER																								
OTHER																								
OTHER																								
INTERIM CONTRACTOR SUPPORT																								
PROCUREMENT COST											1	0.075	10	0.200									11	0.275
INSTALL COST													1	0.030	5	0.085	5	0.100					11	0.215
TOTAL PROGRAM												0.075		0.230		0.085		0.100						0.490

P3A (Continued) **INDIVIDUAL MODIFICATION (Continued)**

MODELS OF SYSTEMS AFFECTED: SSN 719-725,750 MODIFICATION TITLE: TCP 5VDC POWER SUPPLY SHIPALT (5A118)

INSTALLATION INFORMATION:
METHOD OF IMPLEMENTATION: AIT
ADMINISTRATIVE LEADTIME: 6 Months PRODUCTION LEADTIME: 4 Months
CONTRACT DATES: FY 1997: FY 1998: FY 1999:
DELIVERY DATE: FY 1997: FY 1998: FY 1999:

($ in Millions)

Cost:	Prior Years		FY 1995		FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
PRIOR YEARS																								
FY 1995 EQUIPMENT																								
FY 1996 EQUIPMENT																								
FY 1997 EQUIPMENT																								
FY 1998 EQUIPMENT																								
FY 1999 EQUIPMENT													1	0.030									1	0.030
FY 2000 EQUIPMENT															5	0.085	5	0.100					10	0.185
FY 2001 EQUIPMENT																								
FY 2002 EQUIPMENT																								
FY 2003 EQUIPMENT																								
TO COMPLETE																								

INSTALLATION SCHEDULE: SHIP AVAILABILITIES

	FY 1996 & Prior	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001				FY 2002				FY 2003				TC	TOTAL
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		
In	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	5	0	0	0	5	0	0	0	0	0	0	0	0	11
Out	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	1	2	1	1	1	2	0	0	0	0	0	11

CLASSIFICATION: **UNCLASSIFIED**

P3A **INDIVIDUAL MODIFICATION**

MODELS OF SYSTEM AFFECTED: SSN 751-773 PLUS 2 SHORE SITES TYPE MODIFICATION: KP SHIPALT MODIFICATION TITLE: TCP MAINTENANCE MODULAR SHIPALT

DESCRIPTION/JUSTIFICATION:

THIS MOD FACILITATES MAINTENANCE OF THE TCP.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

	FY 1994 & Prior		FY 1995		FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$
FINANCIAL PLAN (IN MILLIONS)																								
RDT&E																								
PROCUREMENT																								
INSTALLATION KITS																								
INSTALLATION KITS NONRECURRING																								
EQUIPMENT											1	0.175	12	0.960	6	0.498	6	0.522					25	2.155
EQUIPMENT NONRECURRING																								
ENGINEERING CHANGE ORDERS																								
DATA																								
TRAINING EQUIPMENT																								
SUPPORT EQUIPMENT																								
OTHER																								
OTHER																								
OTHER																								
INTERIM CONTRACTOR SUPPORT																								
PROCUREMENT COST											1	0.175	12	0.960	6	0.498	6	0.522					25	2.155
INSTALL COST													1	0.125	4	0.420	8	0.880	8	0.920	4	0.480	25	2.825
TOTAL PROGRAM												0.175		1.085		0.918		1.402		0.920		0.480		4.980

P3A (Continued) **INDIVIDUAL MODIFICATION (Continued)**

MODELS OF SYSTEMS AFFECTED: SSN 719-725, 750-773 MODIFICATION TITLE: TCP MAINTENANCE MODULR SHIPALT (5A118)

INSTALLATION INFORMATION:
METHOD OF IMPLEMENTATION: AIT
ADMINISTRATIVE LEADTIME: 6 Months PRODUCTION LEADTIME: 8 Months
CONTRACT DATES: FY 1997: 4/96 FY 1998: 4/97 FY 1999: 4/98
DELIVERY DATE: FY 1997: 2/97 FY 1998: 2/98 FY 1999: 2/99

($ in Millions)

Cost:	Prior Years		FY 1995		FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
PRIOR YEARS																								
FY 1995 EQUIPMENT																								
FY 1996 EQUIPMENT																								
FY 1997 EQUIPMENT																								
FY 1998 EQUIPMENT																								
FY 1999 EQUIPMENT													1	0.125									1	0.125
FY 2000 EQUIPMENT															4	0.420	8	0.880					12	1.300
FY 2001 EQUIPMENT																			6	0.690			6	0.690
FY 2002 EQUIPMENT																			2	0.330	4	0.480	6	0.810
FY 2003 EQUIPMENT																								
TO COMPLETE																								

INSTALLATION SCHEDULE: SHIP AVAILABILITIES

	FY 1996 & Prior	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001				FY 2002				FY 2003				TC	TOTAL
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		
In	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	4	0	0	0	5	3	0	0	5	3	0	0	4	25
Out	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2	1	1	2	2	3	1	2	2	3	4	25

P-3A

CLASSIFICATION: **UNCLASSIFIED**

P3A **INDIVIDUAL MODIFICATION**

MODELS OF SYSTEM AFFECTED: SSN 751-773 PLUS 2 SHORE SITES TYPE MODIFICATION: KP SHIPALT MODIFICATION TITLE: TCP FOLLOW-ON UPGRADE

DESCRIPTION/JUSTIFICATION:

MOD WILL ACCOMPLISH SOME OR ALL OF THE RECOMMENDATIONS IN A 1992 SSN 688 CLASS PLANNING YARD REPORT CHAT WERE NOT ACCOMPLISHED VIA SHIPALT 3939KP, WHICH ACCOMPLISHED 6 OF THE RECOMMENDATIONS.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

	FY 1994 & Prior		FY 1995		FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$
FINANCIAL PLAN (IN MILLIONS)																								
RDT&E																								
PROCUREMENT																								
INSTALLATION KITS																								
INSTALLATION KITS NONRECURRING																								
EQUIPMENT															1	1.295	5	1.000	5	1.050	14	3.500	25	6.845
EQUIPMENT NONRECURRING																								
ENGINEERING CHANGE ORDERS																								
DATA																								
TRAINING EQUIPMENT																								
SUPPORT EQUIPMENT																								
OTHER																								
OTHER																								
OTHER																								
INTERIM CONTRACTOR SUPPORT																								
PROCUREMENT COST															1	1.295	5	1.000	5	1.050	14	3.500	25	6.845
INSTALL COST																	1	0.210	4	0.632	20	3.485	25	4.327
TOTAL PROGRAM																1.295		1.210		1.682		6.985		11.172

P3A (Continued) **INDIVIDUAL MODIFICATION (Continued)**

MODELS OF SYSTEMS AFFECTED: SSN 719-725, 750 MODIFICATION TITLE: TCP FOLLOW-ON UPGRADE

INSTALLATION INFORMATION:
METHOD OF IMPLEMENTATION: AIT
ADMINISTRATIVE LEADTIME: 8 Months PRODUCTION LEADTIME: 12 Months
CONTRACT DATES: FY 1997: FY 1998: FY 1999:
DELIVERY DATE: FY 1997: FY 1998: FY 1999:

($ in Millions)

Cost:	Prior Years		FY 1995		FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		To Complete		Total	
	Qty	**$**	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
PRIOR YEARS																								
FY 1995 EQUIPMENT																								
FY 1996 EQUIPMENT																								
FY 1997 EQUIPMENT																								
FY 1998 EQUIPMENT																								
FY 1999 EQUIPMENT																								
FY 2000 EQUIPMENT																								
FY 2001 EQUIPMENT																	1	0.210					1	0.210
FY 2002 EQUIPMENT																			4	0.632	1	0.174	5	0.806
FY 2003 EQUIPMENT																					5	0.871	5	0.871
TO COMPLETE																					14	2.440	14	2.440

INSTALLATION SCHEDULE: SHIP AVAILABILITIES

	FY 1996 & Prior	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001				FY 2002				FY 2003				TC	TOTAL
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		
In	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	4	0	0	0	20	25
Out	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	2	20	25

P3A **INDIVIDUAL MODIFICATION**

MODELS OF SYSTEM AFFECTED: Subamarine VLS SSN 688I Class TYPE MODIFICATION: AIT MODIFICATION TITLE: Field Change

DESCRIPTION/JUSTIFICATION:

Provides obsolecence related upgrade for Submarine Vertical Launch Systems

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

	FY 1994 & Prior		FY 1995		FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$
FINANCIAL PLAN (IN MILLIONS)																								
RDT&E																								
PROCUREMENT																								
INSTALLATION KITS																								
INSTALLATION KITS NONRECURRING																								
EQUIPMENT																								
EQUIPMENT NONRECURRING																								
ENGINEERING CHANGE ORDERS																								
DATA																								
TRAINING EQUIPMENT																								
SUPPORT EQUIPMENT																								
OTHER																								
OTHER																								
OTHER																								
INTERIM CONTRACTOR SUPPORT																								
PROCUREMENT COST																								
INSTALL COST										0.499*														
TOTAL PROGRAM																								

P3A (Continued) **INDIVIDUAL MODIFICATION (Continued)**

MODELS OF SYSTEMS AFFECTED: Subamarine VLS SSN 688I Class MODIFICATION TITLE: Field Change

INSTALLATION INFORMATION:
METHOD OF IMPLEMENTATION: AIT
ADMINISTRATIVE LEADTIME: 6 Months PRODUCTION LEADTIME: 8 Months
CONTRACT DATES: FY 1997: FY 1998: FY 1999:
DELIVERY DATE: FY 1997: FY 1998: FY 1999:

($ in Millions)

Cost:	Prior Years		FY 1995		FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		To Complete		Total	
	Qty	**$**	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
PRIOR YEARS																								
FY 1995 EQUIPMENT																								
FY 1996 EQUIPMENT																								
FY 1997 EQUIPMENT																								
FY 1998 EQUIPMENT										0.499*														0.499*
FY 1999 EQUIPMENT																								
FY 2000 EQUIPMENT																								
FY 2001 EQUIPMENT																								
FY 2002 EQUIPMENT																								
FY 2003 EQUIPMENT																								
TO COMPLETE																								

INSTALLATION SCHEDULE: SHIP AVAILABILITIES

	FY 1996 & Prior	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001				FY 2002				FY 2003				TC	TOTAL
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		
In	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Out	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

* To be used as Advanced Planning for FY99 effort

CLASSIFICATION: **UNCLASSIFIED**

P3A **INDIVIDUAL MODIFICATION**

MODELS OF SYSTEM AFFECTED: SSN 719-725, 750-752 TYPE MODIFICATION: D ShipAlt MODIFICATION TITLE: MFD 3/9 Position Indicator Stabilizer

DESCRIPTION/JUSTIFICATION:

THIS MOD INSTALLS A STABILIZER TO PREVENT INADVERTENT BUMPING OF THE MFD 3/9 VALVES. AS A D SHIPALT OPN FUNDS ARE NOT USED FOR INSTALLATION.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

	FY 1994 & Prior		FY 1995		FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$
FINANCIAL PLAN (IN MILLIONS)																								
RDT&E																								
PROCUREMENT																								
INSTALLATION KITS																								
INSTALLATION KITS NONRECURRING																								
EQUIPMENT							7	0.015	3	0.008													10	0.023
EQUIPMENT NONRECURRING																								
ENGINEERING CHANGE ORDERS																								
DATA																								
TRAINING EQUIPMENT																								
SUPPORT EQUIPMENT																								
OTHER																								
OTHER																								
OTHER																								
INTERIM CONTRACTOR SUPPORT																								
PROCUREMENT COST							7	0.015	3	0.008													10	0.023
INSTALL COST																								
TOTAL PROGRAM								0.015		0.008														0.023

P3A (Continued) **INDIVIDUAL MODIFICATION (Continued)**

MODELS OF SYSTEMS AFFECTED: SSN 719-725, 750-752 MODIFICATION TITLE: MFD 3/9 Position Indicator Stabilizer

INSTALLATION INFORMATION:
METHOD OF IMPLEMENTATION:
ADMINISTRATIVE LEADTIME: PRODUCTION LEADTIME:
CONTRACT DATES: FY 1997: FY 1998: FY 1999:
DELIVERY DATE: FY 1997: FY 1998: FY 1999:

($ in Millions)

Cost:	Prior Years		FY 1995		FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
PRIOR YEARS																								
FY 1995 EQUIPMENT																							0	0.000
FY 1996 EQUIPMENT																								
FY 1997 EQUIPMENT																								
FY 1998 EQUIPMENT																								
FY 1999 EQUIPMENT																								
FY 2000 EQUIPMENT																								
FY 2001 EQUIPMENT																								
FY 2002 EQUIPMENT																								
FY 2003 EQUIPMENT																								
TO COMPLETE																								

INSTALLATION SCHEDULE: SHIP AVAILABILITIES

	FY 1996 & Prior	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001				FY 2002				FY 2003				TC	TOTAL
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		
In																															
Out																															

P-3A

CLASSIFICATION: **UNCLASSIFIED**

P3A **INDIVIDUAL MODIFICATION**

MODELS OF SYSTEM AFFECTED: SSN 719-725, 750-773 TYPE MODIFICATION: ALTERATION & IMPROVEMENT MODIFICATION TITLE: Parallel HO/ITL Mag Sw

DESCRIPTION/JUSTIFICATION:

THIS MOD INSTALLS MODIFIED HATCH OPEN AND INTENT-TO-LAUNCH MAGNETIC SWITCHES THAT INCREASE LAUNCH RELIABILITY BY COMPLETING EACH CIRCUIT VIA ONE VERSES TWO REEDS. THIS IS AN ALTERATION AND IMPROVEMENT OPN FUNDS ARE NOT USED FOR INSTALLATION.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

	FY 1994 & Prior		FY 1995		FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$
FINANCIAL PLAN (IN MILLIONS)																								
RDT&E																								
PROCUREMENT																								
INSTALLATION KITS																								
INSTALLATION KITS NONRECURRING																								
EQUIPMENT							4	0.335	10	0.300	15	0.547											29	1.182
EQUIPMENT NONRECURRING																								
ENGINEERING CHANGE ORDERS																								
DATA																								
TRAINING EQUIPMENT																								
SUPPORT EQUIPMENT																								
OTHER																								
OTHER																								
OTHER																								
INTERIM CONTRACTOR SUPPORT																								
PROCUREMENT COST							4	0.335	10	0.300	15	0.547											29	1.182
INSTALL COST																								
TOTAL PROGRAM								0.335		0.300		0.547												1.182

P3A (Continued) **INDIVIDUAL MODIFICATION (Continued)**

MODELS OF SYSTEMS AFFECTED: SSN 719-725, 750-773 MODIFICATION TITLE: Parallel HO/ITL Mag Sw

INSTALLATION INFORMATION:
METHOD OF IMPLEMENTATION:
ADMINISTRATIVE LEADTIME: PRODUCTION LEADTIME:
CONTRACT DATES: FY 1997: FY 1998: FY 1999:
DELIVERY DATE: FY 1997: FY 1998: FY 1999:

($ in Millions)

Cost:	Prior Years		FY 1995		FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		To Complete		Total	
	Qty	**$**	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
PRIOR YEARS																								
FY 1995 EQUIPMENT																							0	0.000
FY 1996 EQUIPMENT																								
FY 1997 EQUIPMENT																								
FY 1998 EQUIPMENT																								
FY 1999 EQUIPMENT																								
FY 2000 EQUIPMENT																								
FY 2001 EQUIPMENT																								
FY 2002 EQUIPMENT																								
FY 2003 EQUIPMENT																								
TO COMPLETE																								

INSTALLATION SCHEDULE: SHIP AVAILABILITIES

	FY 1996 & Prior	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001				FY 2002				FY 2003				TC	TOTAL
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		
In																															
Out																															

P-3A

CLASSIFICATION: **UNCLASSIFIED**

P3A **INDIVIDUAL MODIFICATION**

MODELS OF SYSTEM AFFECTED: SSN 719-725, 750-773 TYPE MODIFICATION: ALTERATION & IMPROVEMENT MODIFICATION TITLE: Gagging Pins

DESCRIPTION/JUSTIFICATION:

THIS MOD IS FOR MODIFIED HATCH GAGGING PINS TO REPLACE A DESIGN THAT HAS PERIODICALLY FAILED IN OPERATION. A SINGLE HIT OF 434 TO 500 PINS FOR ALL SHIPS PLUS INTERIOR SUPPLY SUPPORT SPARES WILL BE PROCURED. THIS IS AN ALTERATION AND IMPROVEMENT FOR WHICH OPN FUNDS ARE NOT USED FOR INSTALLATION.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

	FY 1994 & Prior		FY 1995		FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$
FINANCIAL PLAN (IN MILLIONS)																								
RDT&E																								
PROCUREMENT																								
INSTALLATION KITS																								
INSTALLATION KITS NONRECURRING																								
EQUIPMENT							1	0.100															1	0.100
EQUIPMENT NONRECURRING																								
ENGINEERING CHANGE ORDERS																								
DATA																								
TRAINING EQUIPMENT																								
SUPPORT EQUIPMENT																								
OTHER																								
OTHER																								
OTHER																								
INTERIM CONTRACTOR SUPPORT																								
PROCUREMENT COST							1	0.100															1	0.100
INSTALL COST																								
TOTAL PROGRAM							1	0.100																0.100

P3A (Continued) **INDIVIDUAL MODIFICATION (Continued)**

MODELS OF SYSTEMS AFFECTED: SSN 719-725, 750-773 MODIFICATION TITLE: Gagging Pins

INSTALLATION INFORMATION:
METHOD OF IMPLEMENTATION:
ADMINISTRATIVE LEADTIME: PRODUCTION LEADTIME:
CONTRACT DATES: FY 1997: FY 1998: FY 1999:
DELIVERY DATE: FY 1997: FY 1998: FY 1999:

($ in Millions)

Cost:	Prior Years		FY 1995		FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		To Complete		Total	
	Qty	**$**	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
PRIOR YEARS																								
FY 1995 EQUIPMENT																							0	0.000
FY 1996 EQUIPMENT																								
FY 1997 EQUIPMENT																								
FY 1998 EQUIPMENT																								
FY 1999 EQUIPMENT																								
FY 2000 EQUIPMENT																								
FY 2001 EQUIPMENT																								
FY 2002 EQUIPMENT																								
FY 2003 EQUIPMENT																								
TO COMPLETE																								

INSTALLATION SCHEDULE: SHIP AVAILABILITIES

	FY 1996 & Prior	FY 1997 1	2	3	4	FY 1998 1	2	3	4	FY 1999 1	2	3	4	FY 2000 1	2	3	4	FY 2001 1	2	3	4	FY 2002 1	2	3	4	FY 2003 1	2	3	4	TC	TOTAL
In																															
Out																															

BUDGET ITEM JUSTIFICATION SHEET
P-40

DATE: February 1998

APPROPRIATION/BUDGET ACTIVITY
OTHER PROCUREMENT, NAVY
BA-4: Ordnance Support Equipment

P-1 ITEM NOMENCLATURE/LINE ITEM #
Strategic Platform Support Equipment/#535500/#535506

Program Element for Code B Items:

OTHER RELATED PROGRM ELEMENTS

	Prior Years	ID Code			FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total
QUANTITY													
EQUIPMENT COST (In Millions)		A			$2.1	$2.3	$3.0	$9.8	$4.7	$10.5	$5.6		$38.0
SPARES COST (In Millions)													

PROGRAM DESCRIPTION/JUSTIFICATION:

Funding in this P-1 line provides for the procurement of TRIDENT Platform Support Equipment, specifically for ordnance support, ship alterations and test equipment for the TRIDENT Submarine and TRIDENT Refit Facility (TRIREFFAC) located at Naval Submarine Bases (Bangor, WA and Kings Bay, GA) and other support facilities. The TRIDENT program has shifted from its modernization phase as defined by QE2 (Sonar/DWS Upgrade Program) to a program designed to maintain TRIDENT's capability to perform its defined mission. This will be accomplished via its Obsolete Equipment Replacement (OER) program.

OBSOLETE EQUIPMENT REPLACEMENT (OER) - Replacement of existing hardware/software that though functional has become operationally obsolete, is no longer in production or supportable with spare parts, has a high failure rate, or is no longer cost effective to maintain. OER hardware/software changes would be expected to provide a significant cost savings in reduced maintenance costs and would use Commercial-Off-The-Shelf (COTS) Technology where ever possible as long as all technical requirements are met.

INSTALLATION (ORDNANCE) - Provides funding for ordnance equipment installation (commencing FY98) resulting from the TRIDENT OER, Sustaining Program.

WEAPONS SYSTEM COST ANALYSIS P-5						Weapon System TRIDENT Defensive Weapons System			DATE: February 1998		
APPROPRIATION/BUDGET ACTIVITY OTHER PROCUREMENT, NAVY BA-4: Ordnance Support Equipment			ID Code A			P-1 ITEM NOMENCLATURE/SUBHEAD Strategic Platform Support Equipment/84U9					
COST CODE	ELEMENT OF COST	ID Code	TOTAL COST IN THOUSANDS OF DOLLARS								
			FY 1996			FY 1997			FY 1998			FY 1999		
			QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST
	N872													
U9221	Equipment OER	A						$2,061			$2,259			$2,972
U9INS	Installation	A						$0			$0			$0
	Subtotal							$2,061			$2,259			$2,972
TOTAL								**$2,061**			**$2,259**			**$2,972**

BUDGET PROCUREMENT HISTORY AND PLANNING EXHIBIT (P-5A)	Weapon System	A. DATE February 1998
B. APPROPRIATION/BUDGET ACTIVITY Other Procurement, Navy BA-4: Ordnance Support Equipment	C. P-1 ITEM NOMENCLATURE Strategic Platform Support Equipment U9221 Obsolete Equipment Replacement (OER)	SUBHEAD 84U9

Cost Element/ FISCAL YEAR	QTY	UNIT COST (000)	LOCATION OF PCO	RFP ISSUE DATE	CONTRACT METHOD & TYPE	CONTRACTOR AND LOCATION	AWARD DATE	DATE OF FIRST DELIVERY	SPECS AVAILABLE NOW	IF NO WHEN AVAILABLE
Fiscal Year (97)										
CCS MK2 Block 1C # (Shore Sites)	1	$250	NAVSEA	N/A	RC	NUWC NPT/Newport, RI	9/97	12/97	YES	
CCS MK2 Block 1C # (Shore Sites)	1	$154	NAVSEA	N/A	WR	NUWC NPT/Newport, RI	8/97	12/97	YES	
TLCSF Rev. Testing #	1	$86	NAVSEA	N/A	WR	NUWC NPT/Newport, RI	4/97	9/97	YES	
TLCSF Rev. Testing #	1	$352	NAVSEA	N/A	RC	NUWC NPT/Newport, RI	10/97	1/98	YES	
CCS MK2 Block 1C #	1	$250	NAVSEA	N/A	CPFF	EB Corp./Groton, CT	4/97	10/97	YES	
TLCSF Rev. Testing	1	$747	NAVSEA	N/A	WR	NUWC NPT/Newport, RI	4/97	9/97	YES	
TAC-4 Equipment	1	$9	NAVSEA	N/A	WR	NRAD/San Diego, CA	8/97	2/98		
TAC-4 Equipment	1	$213	NAVSEA	N/A	RC	NISMC/Arlington, VA	8/97	2/98		
Fiscal Year (98)										
CCS MK2 Block 1C	1	$1,338	NAVSEA	N/A	CPFF	Under Negotiation	5/98	4/00	YES	
CCS MK2 Block 1C (SS)	1	$870	NAVSEA	N/A	CPFF	Under Negotiation	5/98	4/00	YES	
Trainer Unique Equip	1	$51	NAVSEA	N/A	TBD	Under Negotiation	6/98	4/00	YES	
Fiscal Year (99)										
CCS MK2 Block 1C	1	$1,686	NAVSEA	N/A	CPFF	Under Negotiation	12/98	4/01	YES	
CCS MK2 Block 1C (SS)	1	$1,136	NAVSEA	N/A	CPFF	Under Negotiation	12/98	4/01	YES	
Trainer Unique Equip	1	$150	NAVSEA	N/A	TBD	Under Negotiation	12/98	4/00	YES	

D. REMARKS

FY97 line items broken down to task statement level and show actual amounts funded by individual funding documents throughout FY year based on program requirements and availability of funding.

CLASSIFICATION: **UNCLASSIFIED**

P3A

INDIVIDUAL MODIFICATION

MODELS OF SYSTEM AFFECTED: **TRIDENT Defensive Weapons System (CCS MK2 Mod3//DWS MK118 OER Upgrade)**

TYPE MODIFICATION: **Obsolete Equipment Replacement**

MODIFICATION TITLE: **CCS MK2 Block 1C Upgrade on OHIO Class Submarines**

DESCRIPTION/JUSTIFICATION:

Replace obsolete equipment and achieve optimum commonality among submarine combat systems.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: **OPEVAL = 7/94**

	FY 1994 & Prior		FY 1995		FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$
FINANCIAL PLAN (IN MILLIONS)																								
RDT&E										2.7		3.4												6.2
PROCUREMENT																								
INSTALLATION KITS																								0.0
INSTALLATION KITS NONRECURRING																								0.0
EQUIPMENT									1	1.3	1	1.7	2	2.8	2	2.8	4	6.7	2	3.8	2	5.8	14	24.9
EQUIPMENT NONRECURRING																								0.0
ENGINEERING CHANGE ORDERS																								0.0
DATA																								0.0
TRAINING EQUIPMENT													2	2.4	1	1.5							3	5.6
SUPPORT EQUIPMENT							1	0.6	1	0.9	1	1.1	1	0.9									4	3.5
OTHER									1	0.05	1	0.15	2	3.2	1	0.4	1	0.2	1	0.2			3	4.2
OTHER																								0.0
OTHER																								0.0
INTERIM CONTRACTOR SUPPORT																								0.0
INSTALL COST													3	0.44	1	0.0	4	1.0	4	1.6	8	2.6	20	5.64
TOTAL PROCUREMENT							1	0.6	3	2.3	3	3.0	7	9.3	4	4.7	5	6.9	3	4.0	2	5.8	24	38.2

P3A (Continued) **INDIVIDUAL MODIFICATION (Continued)**

MODELS OF SYSTEMS AFFECTED: **TRIDENT Defsnsive Weapons System (CCS MK2 Mod 3//DWS MK118 OER Upgrade)**

MODIFICATION TITLE: **CCS MK2 Block 1C Upgrade on OHIO Class Submarines**

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: **Engineered Availabilities/Refit Periods**

ADMINISTRATIVE LEADTIME: **12 Months** PRODUCTION LEADTIME: **24 Months**

CONTRACT DATES: **FY 1997:** FY 1998: FY 1999:

DELIVERY DATE: **FY 1997:** FY 1998: FY 1999:

Cost:	Prior Years		FY 1995		FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		To Complete		Total	
	Qty	**$**	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
PRIOR YEARS																								
FY 1995 EQUIPMENT																								
FY 1996 EQUIPMENT																								
FY 1997 EQUIPMENT																								
FY 1998 EQUIPMENT													2	**Note a** 0.14									2	0.15
FY 1999 EQUIPMENT													1	0.30	1	**Note b** 0							2	0.30
FY 2000 EQUIPMENT															0	0	4	**Note #2** 1.0					4	1.1
FY 2001 EQUIPMENT																			4	1.6			4	1.6
FY 2002 EQUIPMENT																					4	**Note c** 1.3	4	1.3
FY 2003 EQUIPMENT																					2	**Note d** 0.4	2	0.4
TO COMPLETE																					2	0.9	2	0.9

INSTALLATION SCHEDULE: SHIP AVAILABILITIES (Not Applicable To Shore Sites)

	FY 1996 & Prior	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001				FY 2002				FY 2003				TC	TOTAL
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		
In	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1	0	1	0	1	0	1	0	8	14
Out	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	2	0	1	0	1	8	14

Note #1 CCS MK2 Block 1C installation cost covered under ARCI/CCS MK 2 Block 1C installation during D-5 Conversion Period (SSBNs 730-733).

Note a Shows installation cost for 1 unit procured in FY98, 1 unit covered by Note #1. (SSBN 732)

Note b No installation cost for 1 unit procured in FY99, this unit covered by Note #1. (SSBN 733)

Note c Shows installation cost for 3 units procured in FY02, 1 unit covered by Note #1. (SSBN 730)

Note d Shows installation cost for 1 units procured in FY03, 1 unit covered by Note #1. (SSBN 731)

Note #2 Shows installation costs for 4 units procurred in FY00. 1 unit covered by STF Norfolk.

BUDGET ITEM JUSTIFICATION SHEET	DATE JANUARY 1998
APPROPRIATION/BUDGET ACTIVITY OTHER PROCUREMENT, NAVY / BUDGET ACTIVITY 4	**P-1 ITEM NOMENCLATURE** STRATEGIC MISSILE SYSTEMS EQUIPMENT (535800/535806)

	FY 96	FY 97	FY 98	FY 99	FY 00	FY 01	FY 02	FY 03
QUANTITY								
Cost (in millions)	$102.1	$124.2	$219.4	$283.6	$195.9	$141.9	$173.6	$179.7

The SSP funding in this P-1 line provides for the procurement of Strategic Weapon System (SWS) equipment for deployed SSBNs and shore support sites to support the TRIDENT program.

OTHER MATERIAL SUPPORT

A broad range of other material support equipment must be procured for deployed SSBNs, shore installations and contractor facilities. Included within this category are general and special purpose test equipment, launcher expendables, navigation principal items, test instrumentation in support of missile flight tests, missile checkout equipment and weapons system operation and evaluation equipment. Amounts included within this P-1 line for this category are subdivided as follows:

($000)

	FY 1996	FY 1997	FY 1998	FY 1999
Maintenance and Support Equipment	$900	$0	$0	$0
Launcher and Handling Equipment	$6,500	$2,779	$1,400	$2,146
Fire Control Equipment	$8,500	$0	$0	$0
Navigation Equipment	$7,700	$0	$7,200	$7,317
Instrumentation/Missile Checkout Equipment	$400	$10,023	$9,700	$6,243
Weapons System Operation and Evaluation Equipment	$1,400	$4,069	$1,100	$976
TOTAL	$25,400	$16,871	$19,400	$16,682

Maintenance and Support Equipment: Funding was required for the procurement of special test and measurement equipment to maintain calibration and repair support at various calibration laboratories; replacement of calibration equipment aboard deployed SSBNs, shore support facilities, and training facilities; procurement of containers for the movement of general purpose electronic test equipment among various locations and procurement of equipment to support the establishment of equipment inventory systems.

Launcher and Handling Equipment: The funding request provides for the procurement of launcher handling and tooling equipment required to support operations at the Eastern Test Range (ETR), the Strategic Weapons Facility, Atlantic (SWFLANT), and at the shipyards and launcher test facility; replacement of worn or damaged special tooling, handling fixtures, and test equipment; and the procurement of TRIDENT II launch tube closures required to replace like items expended during the conduct of TRIDENT II flight test program requirements [Demonstration and Shakedown Operations (DASOs) and Follow-on CINC Evaluation Tests (FCETs)].

Fire Control Equipment: Funding in FY 1996 was for the Fail Safe and Risk Reduction (FARR) initiative to modify the fire control subsystem for the purpose of increasing control of Submarine-Launched Ballistic Missile (SLBM) systems by requiring offboard information prior to launch.

Navigation Equipment: Funding is required for procurement of critical components essential to maintain configuration control and equipment reliability and replacement of worn or damaged items of inertial test equipment used at contractors' plants to support test, evaluation, and analysis of inertial instruments and systems.

Instrumentation/Missile Test Equipment: Funding is required to procure test instrumentation equipment required to maintain launch and impact area arrays in the Atlantic Missile Range. Funding also provides for shorebased and shipboard test instrumentation equipment in support of missile flight tests and for procurement of surface support equipment end items to support replacement requirements generated by fleet-related tactical activities.

Weapon System Operation and Evaluation Equipment: The funding profile provides for replacement of weapon system evaluation equipment which is becoming insupportable as a result of component obsolescence.

ALTERATIONS

Alterations to non-flying tactical hardware are continuing requirements for the Strategic Weapons Systems. Alterations (SPALTs) entail the application of available technology to eliminate personnel safety hazards, correct design deficiencies, maintain system effectiveness by resolving equipment operability problems, and achieve logistic economies. SPALT estimates include both known alterations related to resolution of specific problems as well as calculated, formula-generated alterations based on recent experience. Amounts included in this P-1 line for alterations are subdivided as follows:

($000)

	FY 1996	FY 1997	FY 1998	FY 1999
Launcher and Handling	$100	$7,398	$8,784	$8,780
Fire Control	$7,196	$15,240	$4,910	$4,487
Navigation	$1,100	$13,945	$7,884	$12,390
Instrumentation/Missile Checkout	$1,300	$1,294	$899	$1,562
TOTAL	$9,696	$37,877	$22,477	$27,219

Funding is required to procure formula generated alterations to the Strategic Weapons System launcher and fire control subsystems; to inertial, non-inertial, and Electrostatically Supported Gyro Navigator (ESGN) navigation subsystem equipment on deployed SSBNs and installed at supporting shore facilities, including the Trident Training Facility (TTF), Bangor, TTF, Kings Bay, the Ashore Navigation Center, and the Inertial System Test Laboratory; to test instrumentation used on SSBNs, support ships and at the Eastern Test Range, the TRIDENT Refit Facility (TRF), Bangor, and TRF Kings Bay; and to missile handling equipment, missile test and readiness equipment, and surface support equipment. Installation of approved SPALTs is performed on a turnkey basis in conjunction with the procurement of equipment.

TRAINING

This category provides for procurement of, and alterations to, both tactical and non-tactical equipment required at submarine training facilities to train personnel in the operation and maintenance of launcher and handling, fire control, navigation, missile checkout, and sonar subsystems. Each training facility consists of an integrated family of system and unit laboratories which interfaces with a central stimulation complex to provide complete and realistic training for replacement and off crew personnel, both officer and enlisted, as required for manning of SSBNs and shore facilities. Funding in FY 1997-FY 1999 is budgeted to procure training unique equipment required as the result of SPALTs to SWS tactical equipment. Amounts included in this P-1 line for training are as follows:

($000)

	FY 1996	FY 1997	FY 1998	FY 1999
Training Support Equipment	$168	$4,491	$7,528	$8,497

TRIDENT SWS NAVIGATION COMMONALITY PROGRAM

Funding in this category provides for procurement and installation of TRIDENT-common Strategic Weapon System (SWS) Navigation systems. Moderni--zation is required to extend SWS Navigation service life consistent with planned SSBN service life, and will support either TRIDENT I (C-4) or TRIDENT II (D-5) SWS configuration. Implementation of the C-4/D-5 TRIDENT SWS Navigation Commonality Program (TNCP) commenced with the first TRIDENT SSBN Engineered Overhaul (EOH) of the SSBN 726; SSBNs 727 and 728 also received TNCP upgrades during their scheduled EOHs. Also being procured is a round-robin unit which will be installed on SSBN 733 during backfit, alleviating the need to remove SSBN 727 from strategic service in FY 2000. Requirements in this category also include modifications to training facilities and other weapon system subsystem interfaces where required to support the Navigation Commonality Program.

($000)

SPALT #40294	FY 1996	FY 1997	FY 1998	FY 1999
Equipment (535800)	$44,000	$31,261	$0	$0
Installation (535806)				
SSBN 728	$22,865	$0	$0	$0

	FY 2000	FY 2001	FY 2002	FY 2003
Installation (535806)	$0	$0	$0	$0

TRIDENT II (D-5) BACKFIT

Beginning in FY 2000, four 726-Class TRIDENT I (C-4) submarines will be backfitted to TRIDENT II (D-5) configuration during their regularly scheduled overhauls. OPN funding for this effort supports procurement of TRIDENT II (D-5) weapons system equipment required to replace C-4 equipment. The FY 1997 request provides for SWS production requalification and restart costs required to requalify the inactive industrial base as a result of the large gap between the completion of SSBN new construction production and the start of backfit production efforts. Also included are the related class planning and system integration efforts associated with the SWS reengineering. FY 1998 and FY 1999 funding supports production on a leadtime from need basis of SWS subsystem and training equipment.

($000)

FY 1996	FY 1997	FY 1998	FY 1999
$0	$33,742	$170,000	$231,214

WEAPON SYSTEM COST ANALYSIS EXHIBIT (P-5) PROGRAM COST BREAKDOWN								DATE: JAN 1998
A. APPROPRIATION/BUDGET ACTIVITY OPN BA-4: ORDNANCE SUPPORT EQUIPMENT		P-1 ITEM NOMENCLATURE/SUBHEAD STRATEGIC MISSILE SYSTEMS EQUIPMENT/34U9						
		TOTAL COST IN THOUSANDS OF DOLLARS						
WEAPON SYSTEM COST ELEMENTS	Ident. Code	FY 96 Qty	TOTAL COST	FY 97 Qty	TOTAL COST	FY 98 Qty	TOTAL COST	FY 99 Qty	TOTAL COST
OTHER MATERIAL SUPPORT			25,400		16,871		19,400		16,682
ALTERATIONS			9,696		37,877		22,477		27,219
TRAINING			168		4,491		7,528		8,497
TRIDENT II SWS NAVIGATION COMMONALITY PROGRAM (TNCP):									
EQUIPMENT		1	44,000	1	31,261		0		0
INSTALLATION			22,865		0		0		0
TRIDENT II BACKFIT			0		33,742		170,000		231,214
TOTAL			102,129		124,242		219,405		283,612

MODIFICATION TITLE: TRIDENT II SWS NAVIGATION COMMONALITY PROGRAM (TNCP)
MODELS OF SYSTEMS AFFECTED: 726-CLASS SSBNS
DESCRIPTION/JUST: TNCP is required to extend Strategic Weapon System (SWS) Navigation service life consistent with planned SSBN service life and will support either TRIDENT I (C-4) or TRIDENT II (D-5) SWS configuration.
DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:
FINANCIAL PLAN ($ in Millions)

	FY 96 & PY		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																			0	0.0
PROCUREMENT																			0	0.0
Kit Quantity																			0	0.0
Installation Kits																			0	0.0
Installation Kit Nonrecurring																			0	0.0
Equipment	4	129.2																	4	129.2
Equipment Nonrecurring																			0	0.0
Engineering Change Orders																			0	0.0
Data																			0	0.0
Training Equipment (TTF, BANGOR 1/)	1	44.0																	1	44.0
Support Equipment																			0	0.0
Other (ROUND ROBIN SYSTEM)(R/R)			1	31.3															1	31.3
Interim Contractor Support																			0	0.0
Installation of Hardware																			0	0.0
FY96 & PY Equip	2	42.4																	2	42.4
FY97 Equip																			0	0.0
FY98 Equip																			0	0.0
FY99 Equip																			0	0.0
FY00 Equip																			0	0.0
FY01 Equip																			0	0.0
FY02 Equip																			0	0.0
FY03 Equip																			0	0.0
FY(TC) Equip																			0	0.0
Total Installation Cost		42.4		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		42.4
Total Procurement Cost		173.2		31.3		0.0		0.0		0.0		0.0		0.0		0.0		0.0		204.5
Total Cost		215.6		31.3		0.0		0.0		0.0		0.0		0.0		0.0		0.0		246.9

METHOD OF IMPLEMENTATION: During TRIDENT SSBN Engineered Overhauls at the TRIDENT Refit Facility, Bangor, WA, and during the backfit of TRIDENT I SSBNs to TRIDENT II capability at the Puget Sound Naval Shipyard. ADMIN LEADTIME: 9 MOS. PROD LEADTIME: 24 MOS.

CONTRACT DATES: FY 1994: OCT 93 (728) FY 1995: OCT 94 (732) FY 1996: OCT 95 (TTF 1/) FY 1997: OCT 96 (R/R-733)
DELIVERY DATES: FY 1994: OCT 95 FY 1995: OCT 96 FY 1996: FEB 97 FY 1997: OCT 98

INSTALL SCHEDULE	FY 1996 & PY	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	TC	TOTAL
INPUT										
FY96 & PY	SSBNs 726/727/728	0,1,0,0			0,0,1,0 2/					5
FY97		(TTF 1/)			(SSBN 732)	0,1,0,0 2/				1
FY98						(SSBN 733)				0
FY99										0
OUTPUT										
FY96 & PY	SSBNs 726/727/728	0,0,0,1				1,0,0,0 2/				5
FY97		(TTF 1/)				(SSBN 732)	0,0,1,0 2/			1
FY98							(SSBN 733)			0
FY99										0
FY00										0
FY01										0
FY02										0
FY03										0
TC										0

SCHEDULE:	START	COMPL.
SSBN 726	7/93	6/94
SSBN 727	10/94	7/95
SSBN 728	10/95	7/96
TTF (RFT) 1/		7/97
SSBN 732	5/00	11/01
SSBN 733	1/01	6/02

1/ TTF - TRIDENT Training Facility, Bangor, WA; RFT - Ready for Training Date.
2/ TNCP installation costs for SSBNs 732 and 733 are included within the overall TRIDENT II D-5) Backfit program work package.

CLASSIFICATION: UNCLASSIFIED

MODIFICATION INSTALLATION SUMMARY (EXHIBIT P-3N) (TOA, Dollars in Millions)							DATE: JANUARY 1998
APPROPRIATION/BUDGET ACTIVITY: OTHER PROCUREMENT, NAVY BA-4: ORDNANCE SUPPORT EQUIPMENT				P-1 ITEM NOMENCLATURE: STRATEGIC MISSILE SYSTEMS EQUIPMENT			
SYSTEM/MODIFICATION	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002
TRIDENT NAVIGATION COMMONALITY PROGRAM (TNCP)	22.9	-	-	-	-	-	-

BUDGET ITEM JUSTIFICATION SHEET P-40												DATE: FEBRUARY 1998	
APPROPRIATION/BUDGET ACTIVITY OTHER PROCUREMENT, NAVY 4 - ORDNANCE SUPPORT EQUIPMENT								P-1 ITEM NOMENCLATURE/LINE ITEM # ANTI-SHIP MISSILE DECOY SYSTEMS/5530					
Program Element for Code B Items: 0604755N, Project Number: U2190								OTHER RELATED PROGRAM ELEMENTS N/A					
	Prior Years	ID Code	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total
QUANTITY													0
EQUIPMENT COST (In Millions)	N/A	B	N/A	N/A	$23.6	$17.9	$21.5	$22.7	$20.3	$19.8	$18.8	N/A	$144.5
SPARES COST (In Millions)	N/A		*N/A*	N/A	$0.0	$0.15	$0.0	$0.0	$0.0	$0.0	$0.0	N/A	$0.2

PROGRAM DESCRIPTION/JUSTIFICATION:

JUSTIFICATION: The Anti-Ship Missile Decoy Program covers a family of decoys and the equipment to deploy them. It is an essential element of the Anti-Ship Missile Defense (ASMD) tactics to counter the threat of enemy homing missiles. The program is funded under two subheads, this one covering launching systems and related equipment, and Shipboard Expendable Countermeasures (14VP) covering consumable decoys. Equipment funded under this line includes:

MK 36 SYSTEM EXPANSION KITS/ORDALTS: MK 36 Expansion Kits (ORDALTS 15579/15589) are being procured for each ship currently equipped with a two- or four- launcher system. The additional aft facing launchers increase decoy effectiveness against modern missile threats. The pending introduction of additional decoy types has resulted in an increased requirement for decoy launchers and ready service storage capacity. Accordingly, a program has been initiated to expand two- and four-launcher systems by installing two additional launchers and related equipment along with improvements to the fire control subsystem. Concurrently, existing 20 round Ready Service Lockers are replaced with a new 35 round locker. The larger lockers are also being installed as quickly as the equipment becomes available.

NULKA: This line contains various equipment and subsystems for a system which will provide the capability to defeat the effectiveness of hostile Anti-Ship cruise missiles. Currently Nulka is scheduled to be installed on the following ship classes: DD 963, DDG 51, CG 47, LSD 41, LPD 17, and DD 21. The installation will be performed during a limited availability by shipalt, or by AIT. Final installation plans will be made upon maturation of ship installation design. No ROH required.

(a) Decoys and launching system equipment. An active off-board Anti-Ship Missile Decoy System.
(b) Production Engineering Support.

Nulka is a joint program with the Australians, who have made the decision to proceed with outfitting into their combatants. Initial Operational Testing of Nulka was completed in December 1992, with COMOPTEVFOR recommending limited fleet introduction and continued development. Nulka is currently in the final stage of development with initial production decision approved April 1997. Production contract award for the decoy was made in June 1997. An initial production decision for the launch system is expected in March 1998 with award in April 1998. Nulka will undergo TECHEVAL and OPEVAL in June 1998 with a full production decision planned for September 1998.

EQUIPMENT INSTALLATION: Funding is for the installation of equipment, including Fleet Modernization Program Installs, and installation of equipment at shore facilities.

WEAPONS SYSTEM COST ANALYSIS P-5	Weapon System	DATE: FEBRUARY 1998
APPROPRIATION/BUDGET ACTIVITY OTHER PROCUREMENT, NAVY/BA-4 - ORDNANCE SUPPORT EQUIPMENT	ID Code B	P-1 ITEM NOMENCLATURE/SUBHEAD ANTI-SHIP MISSILE DECOY SYSTEMS/14VV

COST CODE	ELEMENT OF COST	ID Code	TOTAL COST IN THOUSANDS OF DOLLARS											
						FY 1997			FY 1998			FY 1999		
			QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST
	N86													
	EQUIPMENT													
VV001	NULKA SYSTEMS	B				2	972	1,944	5	972	4,860	11	510	5,610
VV002	NULKA DECOYS	B				54	220	11,880	27	235	6,345	33	240	7,920
VV003	Engineering Changes and Logistics Suppt							5,704			2,576			2,667
	Engineering Changes							(1,640)			(1,466)			(1,427)
	Logistics Support							(1,214)			(1,110)			(1,240)
	ASMD Non-Recurring							(2,850)						
VV830	Production Engineering							1,868			1,700			1,700
	INSTALL													
VVINS	Installation (FMP)							2,166			2,436			3,607
TOTAL PROGRAM								**23,562**			**17,917**			**21,504**

BUDGET PROCUREMENT HISTORY AND PLANNING EXHIBIT (P-5A)	Weapon System	A. DATE FEBRUARY 1998
B. APPROPRIATION/BUDGET ACTIVITY OTHER PROCUREMENT, NAVY/BA-4 - ORDNANCE SUPPORT EQUIPMENT	C. P-1 ITEM NOMENCLATURE ANTI-SHIP MISSILE DECOY LAUNCHING SYSTEM	SUBHEAD 14VV

Cost Element/ FISCAL YEAR	QTY	UNIT COST (000)	LOCATION OF PCO	RFP ISSUE DATE	CONTRACT METHOD & TYPE	CONTRACTOR AND LOCATION	AWARD DATE	DATE OF FIRST DELIVERY	SPECS AVAILABLE NOW	IF NO WHEN AVAILABLE
FISCAL YEAR 97										
VV001 (Systems)	2	972			FP	Sippican, MASS	4/98	1/99	YES	
VV002 (Decoys)	54	220			FP	BAeA, Australia	6/97	2/98*	YES	
FISCAL YEAR 98										
VV001 (Systems)	5	972			FP	Sippican, MASS	4/98	1/99	YES	
VV002 (Decoys)	27	235			FP	BAeA, Australia	9/98	5/99	YES	
FISCAL YEAR 99										
VV001 (Systems)	11	510			C/FP	TBD (Competitive)	3/99	12/99	YES	
VV002 (Decoys)	33	240			FP	BAeA, Australia	4/99	1/00	YES	

D. REMARKS

* Date of first delivery of U.S. decoy is 6/98

CLASSIFICATION: **UNCLASSIFIED**

P3A **INDIVIDUAL MODIFICATION**

MODELS OF SYSTEM AFFECTED: None - Original Installations TYPE MODIFICATION: MODIFICATION TITLE: NULKA

DESCRIPTION/JUSTIFICATION:

Launching system modifications to support NULKA Decoy.

* Qty (1) trainer procurement with install cost included.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

	FY 1994 & Prior		FY 1995		FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$
FINANCIAL PLAN (IN MILLIONS)																								
RDT&E					3/58	102.5	0	6.1	0	8.2	0	8.2	0	7.0	0	5.6	0	3.6	0	6.5			3/58	45.2
PROCUREMENT																								
INSTALLATION KITS							1	0.97	5	4.9	11	5.6	8	4.1	10	5.1	7	3.6	9	4.7	44	22.9	95	51.8
INSTALLATION KITS NONRECURRING																								0.0
EQUIPMENT																								0.0
EQUIPMENT NONRECURRING								0.37		0.37														0.7
ENGINEERING CHANGE ORDERS																								0.0
UNIT COST DATA FOR EQUIPMENT								0.60		0.60		0.51		0.51		0.51		0.52		0.52				3.77
TRAINING EQUIPMENT							1*	0.97															1	0.97
SUPPORT EQUIPMENT																								0.0
OTHER (DECOYS)							54	11.9	27	6.3	33	7.9	39	9.8	30	7.5	31	7.8	21	5.3	267	66.8	502	123.3
OTHER																								0.0
OTHER																								0.0
INTERIM CONTRACTOR SUPPORT																								
PROCUREMENT COST							56	14.9	32	11.2	44	13.5	47	13.9	40	12.6	38	11.4	30	10.0	311	89.6	598	180.5
INSTALL COST										2.20	7	3.60	11	4.95	8	3.40	10	4.24	7	5.52	44	13.20	96	37.1
TOTAL PROGRAM								14.9		13.4		17.1		18.8		16.0		15.6		15.5		102.8		214.2

P3A (Continued) **INDIVIDUAL MODIFICATION (Continued**

MODELS OF SYSTEMS AFFECTED: **None. Original Installations** MODIFICATION TITLE: NULKA

INSTALLATION INFORMATION:
METHOD OF IMPLEMENTATION: **AIT/SHIPALT**
ADMINISTRATIVE LEADTIME: 6 Months PRODUCTION LEADTIME: 9 Months
CONTRACT DATES: FY 1997: November 1997 FY 1998: November 1997 FY 1999: May 1999
DELIVERY DATE: FY 1997: September 1998 FY 1998: December 1998 FY 1999: February 2000

($ in Millions)

Cost:	Prior Years		FY 1995		FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		To Complete		Total	
	Qty	**$**	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
PRIOR YEARS																								
FY 1995 EQUIPMENT																								
FY 1996 EQUIPMENT																								
FY 1997 EQUIPMENT										0.50	* 2	0.54												1.04
FY 1998 EQUIPMENT										1.49	5	1.66												3.15
FY 1999 EQUIPMENT										0.34		1.32	11	4.00										5.66
FY 2000 EQUIPMENT												0.07		0.65	7	2.34	1							3.06
FY 2001 EQUIPMENT														0.26		0.67	6	2.9	4					3.83
FY 2002 EQUIPMENT																0.42		1.41	6	5.06	1			6.89
FY 2003 EQUIPMENT																		0.18		0.56	9	2.79		3.53
TO COMPLETE																					35	10.85		10.85

* Qty (1) trainer procurement with install cost included

INSTALLATION SCHEDULE: SHIP AVAILABILITIES

	FY 1996 & Prior	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001				FY 2002				FY 2003				TC	TOTAL
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		
In	0	0	0	0	0	0	0	0	0	3	2	1	1	0	3	4	4	0	1	4	2	1	2	2	2	1	3	5	1	54	96
Out	0	0	0	0	0	0	0	0	0	0	3	2	1	1	0	3	4	4	0	1	4	2	1	2	2	2	1	3	5	55	96

CLASSIFICATION: **UNCLASSIFIED**

P3A **INDIVIDUAL MODIFICATION**

MODELS OF SYSTEM AFFECTED: MK 36 Mod 1/2/5/6 TYPE MODIFICATION: MODIFICATION TITLE: MK 36 DECOY LAUNCHING SYS EXPANSION

DESCRIPTION/JUSTIFICATION:

Installation provides improved decoy placement capability and additional ready service storage.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

	FY 1994 & Prior		FY 1995		FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$
FINANCIAL PLAN (IN MILLIONS)																								
RDT&E					7	1.0																	7	1.0
PROCUREMENT																								
INSTALLATION KITS																							0	0.0
INSTALLATION KITS NONRECURRING																								0.0
EQUIPMENT					7	1.0																		1.0
EQUIPMENT NONRECURRING																								0.0
ENGINEERING CHANGE ORDERS																								0.0
UNIT COST DATA FOR EQUIPMENT																								0.0
TRAINING EQUIPMENT																								0.0
SUPPORT EQUIPMENT																								0.0
OTHER																								0.0
OTHER																								0.0
OTHER																								0.0
INTERIM CONTRACTOR SUPPORT																								0.0
PROCUREMENT COST			0		7	1.0																		1.0
INSTALL COST					2	2.51	3	2.12	1	0.14		0.02		0.04	1	0.14							7	4.97
TOTAL PROGRAM						3.51		2.12		0.14		0.02		0.04		0.14								5.97

P3A (Continued) **INDIVIDUAL MODIFICATION (Continued)**

MODELS OF SYSTEMS AFFECTED: **MK 36 Mod 1/2/5/6** MODIFICATION TITLE: MK 36 DECOY LAUNCHING SYSTEM EXPANSION

INSTALLATION INFORMATION:
METHOD OF IMPLEMENTATION: **SHIPALT**
ADMINISTRATIVE LEADTIME: 6 Months PRODUCTION LEADTIME: 6 Months
CONTRACT DATES: FY 1997: FY 1998: FY 1999:
DELIVERY DATE: FY 1997: FY 1998: FY 1999:

($ in Millions)

Cost:	Prior Years		FY 1995		FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		To Complete		Total	
	Qty	**$**	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
PRIOR YEARS																								
FY 1995 EQUIPMENT																								
FY 1996 EQUIPMENT					2	2.51	3	2.12	1	0.14		0.02		0.04	1	0.14							7	4.97
FY 1997 EQUIPMENT																								
FY 1998 EQUIPMENT																								
FY 1999 EQUIPMENT																								
FY 2000 EQUIPMENT																								
FY 2001 EQUIPMENT																								
FY 2002 EQUIPMENT																								
FY 2003 EQUIPMENT																								
TO COMPLETE																								

INSTALLATION SCHEDULE: SHIP AVAILABILITIES

	FY 1996 & Prior	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001				FY 2002				FY 2003				TC	TOTAL
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		
In	2	1	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	7
Out	0	2	1	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	7

FY 1998/99 BUDGET PRODUCTION SCHEDULE, P-21										DATE **FEBRUARY 1998**	
APPROPRIATION/BUDGET ACTIVITY **OTHER PROCUREMENT, NAVY/BA-4 - ORDNANCE SUPPORT EQUIPMENT**						Weapon System				P-1 ITEM NOMENCLATURE ANTI-SHIP MISSILE DECOY SYSTEMS/14VV	
		Production Rate			Procurement Leadtimes						
Item	Manufacturer's Name and Location	MSR	1-8-5	MAX	ALT Prior to Oct 1	ALT After Oct 1	Initial Mfg PLT	Reorder Mfg PLT	Total		Unit of Measure
MK 53 DECOY LAUNCH SYSTEM	Sippican, MASS										
MK 234 NULKA ELECTRONIC DECOY	BAeA, Australia	100		200		6	9	9			

ITEM / MANUFACTURER	FY	SVC	QTY	DEL	BAL	FISCAL YEAR 1997												FISCAL YEAR 1998										BAL
						1996			CALENDAR YEAR 1997										CALENDAR YEAR 1998										
						OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
MK 53 DECOY LAUNCH SYSTEMS	97/98		7	0	7																			A					7
MK 234 NULKA ELEC. DECOY (U.S.)	97		54	0	54									A												13	15	13	15	0
MK 234 NULKA DECOY (Non-U.S.)	97		274	0	274									A							3	3	3	3					262
MK 234 NULKA ELEC. DECOY (U.S.)	98		27	0	27																							A	27
MK 234 NULKA DECOY (Non-U.S.)	98		32	0	32																			A					32

ITEM / MANUFACTURER	FY	SVC	QTY	DEL	BAL	FISCAL YEAR 1999												FISCAL YEAR 2000										BAL
						1998			CALENDAR YEAR 1999										CALENDAR YEAR 2000										
						OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
MK 53 DECOY LAUNCH SYSTEMS	97/98		7	0	7				1	1	1	1	1	1	1															0
MK 53 DECOY LAUNCH SYSTEMS	99		11	0	11						A									2	1	2	1	1	2	1	1			0
MK 53 DECOY LAUNCH SYSTEMS	00		8	0	8																				A					8
MK 234 NULKA DECOY (Non-U.S.)	97		274	12	262	15	15	15	15	15	15	5	4	5	4	7	2	5	5	5	13	13	7	6	7	6	9	9	9	51
MK 234 NULKA ELEC. DECOY (U.S.)	98		27	0	27								5	6	5	6	5													0
MK 234 NULKA DECOY (Non-U.S.)	98		32	0	32												8	8	8	5	1	1	1							
MK 234 NULKA ELEC. DECOY (U.S.)	99		33	0	33							A								6	2	2	8	6	6	3				0
MK 234 NULKA DECOY (Non-U.S.)	99		32	0	32							A															4	4	4	20
MK 234 NULKA ELEC. DECOY (U.S.)	00		39	0	39																	A							39

Remarks: Decoy Production rates are based on a combined United States, Australia and Canada production schedule. Australia and Canada are not buying US Ship system. Presently no other countries are buying this system or decoy.

FY 1998/99 BUDGET PRODUCTION SCHEDULE, P-21					DATE **FEBRUARY 1998**	
APPROPRIATION/BUDGET ACTIVITY **OTHER PROCUREMENT, NAVY**		Weapon System			P-1 ITEM NOMENCLATURE ANTI-SHIP MISSILE DECOY SYSTEMS/14VV	
		Production Rate			Procurement Leadtimes					
Item	Manufacturer's Name and Location	MSR	1-8-5	MAX	ALT Prior to Oct 1	ALT After Oct 1	Initial Mfg PLT	Reorder Mfg PLT	Total	Unit of Measure
MK 53 DECOY LAUNCH SYSTEM	Sippican, MASS									
MK 234 NULKA ELECTRONIC DECOY	BAeA, Australia	100		200		6	9	9		

ITEM / MANUFACTURER	FY	SVC	QTY	DEL	BAL	FISCAL YEAR 2001												FISCAL YEAR 2002											BAL
						2000			CALENDAR YEAR 2001												CALENDAR YEAR 2002									
						OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
MK 53 DECOY LAUNCH SYSTEMS	00		8	0	8					1	1	2	1	1	2														0
MK 53 DECOY LAUNCH SYSTEMS	01		10	0	10								A									2	1	2	1	1	1	2		0
MK 53 DECOY LAUNCH SYSTEMS	02		7	0	7																				A					7
MK 234 NULKA DECOY (Non-U.S.)	97		274	223	51	4	5	4	5	5	4	5	4	8	7															0
MK 234 NULKA DECOY (Non-U.S.)	99		32	12	20	5	5	5	5																					0
MK 234 NULKA ELEC. DECOY (U.S.)	00		39	0	39	7	6	7	6	6	7																			0
MK 234 NULKA ELEC. DECOY (U.S.)	01		30	0	30					A								7	9	7	7									0
MK 234 NULKA ELEC. DECOY (U.S.)	02		31	0	31																	A								31

ITEM / MANUFACTURER	FY	SVC	QTY	DEL	BAL	FISCAL YEAR 2003												FISCAL YEAR 2004											BAL
						2002			CALENDAR YEAR 2003												CALENDAR YEAR 2004									
						OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
MK 53 DECOY LAUNCH SYSTEMS	02		7	0	7					2	1	2	1	1															0
MK 53 DECOY LAUNCH SYSTEMS	03		9	0	9								A									2	1	2	2	2				0
MK 234 NULKA ELEC. DECOY (U.S.)	02		31	0	31	8	8	8	7																					0
MK 234 NULKA ELEC. DECOY (U.S.)	03		21	0	21					A								7	7	7										0

Remarks: Decoy Production rates are based on a combined United States, Australia and Canada production schedule. Australia and Canada are not buying the US Ship system. Presently no other countries are buying this system or decoy.

BUDGET ITEM JUSTIFICATION SHEET P-40	DATE: February 1998
APPROPRIATION/BUDGET ACTIVITY OTHER PROCUREMENT, NAVY / BA-4 ORDNANCE SUPPORT EQUIPMENT	P-1 ITEM NOMENCLATURE/LINE ITEM # SSN COMBAT CONTROL SYSTEM/ 54200
Program Element for Code B Items: 0604562N	OTHER RELATED PROGRAM ELEMENTS

	Prior Years	ID Code			FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total
QUANTITY	N/A				N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0
EQUIPMENT COST (In Millions)		B			$14.1	$19.0	$17.5	$32.1	$36.9	$56.3	$54.0		$229.8
SPARES COST (In Millions)					$0.0	$1.0	$1.0	$1.8	$1.3	$0.3	$0.1		$5.5

PROGRAM DESCRIPTION/JUSTIFICATION:

FCS MK 117/CCS MK 1 IMPROVEMENTS (VB011)

Engineering Changes/Auxiliary Equipment (VB011) - Provides for the procurement of Engineering Changes (EC) and Ordnance Alterations (ORDALT) to correct fleet reported problems; Reliability, Maintainability, and Availability (RM&A) deficiencies, and Safety issues associated with in-service SSN/SSBN Combat Control System components and Fire Control System components and interface Equipments, interfacing systems and peripheral or special equipment. Examples include: corrections to Weapons Control Console power supplies; keyboard printer replacements; Vertical Launch System suite improvements to satisfy Environmental Stress Screening (ESS) deficiencies; and correction of RM&A deficiencies of the Mk 92 Attack Control Console.

CCS OBSOLETE EQUIPMENT REPLACEMENT (OER) PROGRAM (VB034)

The SSN Combat System OER Program (VB034) - Mandated by OPNAV to achieve maximum commonality onboard SSN 688 Class, SSN 751 Flight and SSBN 726 Class submarines. The CCS OER program is commonly referred to as the Combat Control System (CCS) Mk 2 Program D0. A competitive contract was awarded for CCS Mk 2, on a Firm Fixed Price basis in September 1988. Production options extended through fiscal year 1992. For FY93, a one year Sole Source Fixed Price contract to the incumbent (Raytheon Submarine Signal Division) was awarded.

Contractual efforts included standardization of hardware and software; improved reliability, maintainability and operability; a reduced number of system configurations; improved operational capabilities; and overall reduced Life Cycle Cost. The OER program will replace obsolete and unreliable equipment and will achieve optimum commonality among submarine combat systems by incorporating the AN/UYK-43 Navy Standard Computer with Embedded Memory Subsystem (EMS) to replace the AN/UYK-7 computer; replacing the obsolete input/output device with a new, more reliable keyboard printer; adding a parallel processor for Over The Horizon Targeting and adding new Common Display Consoles to replace obsolete Standard Information Displays (onboard SSBNs) and MK 81 Weapon Control Consoles (onboard SSNs). Additionally, the new Tactical Weapons Simulator replaces both the Mk 75 Digital Missile Simulator and the Mk 22 Weapon Simulator, saving space and weight, while improving reliability and logistics support.

In FY 97 and beyond the OER program will consist of CCS Mk2 Block 1C upgrade kits which will maximize the use of commercial electronics and NDI standard products, reducing procurement and life cycle costs while providing an open architecture for future growth. Combat control display processors will be replaced with Navy standard commercial technology. TAC-X computers will be procured and integrated with the Combat Control System via fiber optic local area network; commercial electronics will also be procured and packaged to replace the Data Transfer System (DTS), AN/UGC-136 keyboard printer and the Tactical Weapons Simulator (TWS).

Additionally, the OER program will procure twenty (20) AN/BSG-1 systems (formerly referred to as Tomahawk Land Attack Missile - Nuclear (TLAM-N) Portable Launching System (PLS)) and develop and produce the necessary Engineering Change Instructions (ECIs) and Ship Alteration (SHIPALT) kits for compatibility with SSN 688 and SSN 688I hulls. The AN/BSG-1 is a portable on-demand system that will provide SSN 688/688I and NSSN Class submarines the capability of supporting TLAM-N regeneration and launch with minimum impact to the submarine and crew.

BUDGET ITEM JUSTIFICATION SHEET P-40 CONTINUATION	DATE: February 1998
APPROPRIATION/BUDGET ACTIVITY OTHER PROCUREMENT, NAVY / BA-4 ORDNANCE SUPPORT EQUIPMENT	P-1 ITEM NOMENCLATURE/LINE ITEM # SSN COMBAT CONTROL SYSTEM/ 54200

PRODUCTION SUPPORT (VB033)

This account (VB033) procures technical data, maintenance data, mock-ups, demonstrations and testing products directly for the SSN Combat System Obsolete Equipment Replacement (OER) program. Also procured are services required to support production engineering, quality assurance, product improvement and acceptance testing for production line items. Technical on-site support at shipyards and depots for hardware related problems is also included.

LOGISTIC SUPPORT REQUIREMENTS (VB900)

This account (VB900) procures engineering and technical support at the organic depot (NUWC Division, Keyport) for equipment maintenance and overhauls. Also procured are engineering services which perform essential documentation updates related to major hardware revisions. VB900 also procures laboratory hardware requirements including Generalized Simulation/Stimulation (GSS) hardware and auxiliary testing and operating equipment.

INITIAL TRAINING (VB995)

This account funds the initial factory training including both training deliverables and instructional services to familiarize the initial cadre of instructional personnel with an end item. Also included is the cost of preparation of training packages through the Ready-for-Training (RFT) date.

CONSULTING SERVICES (VB983)

This account provides assistance for asset management, cost analyses, ORDALT planning, preparation of contract specifications, monitoring of contract deliverables, prime contractor cost, schedule and performance monitoring, ILS planning and GFI coordination.

EQUIPMENT INSTALLATION (VB5NS)

Funds are administered by SEA 914 for the installation of Combat Control System equipments included in the Fleet Modernization Program. The budget reflects the transfer of design services into the appropriate equipment P-1 line item in accordance with full funding policy FY 98 and out.

OTHER INFORMATION

Developmental efforts are funded by Program Element 64562N within the SSN Combat Control System Improvement Program S0236. CCS Mk 2 is a functionally equivalent software program (Program D0) that rehosted and repackaged the CCS Mk1 program into a program capable of cost effective updating and software maintenance for SSN 688 and TRIDENT CLASS submarines. CNO direction to install a functionally equivalent Combat System was given per CNO letter 5000 Ser 02/7U384408 dtd 09 July 1987. On 28 May 1996, the CCS MK2 Block 1C program received Milestone II approval and is initiating development effort with Raytheon Electronic Systems . The total procurement objective for the SSN COMBAT CONTROL SYSTEM budget is to outfit 44 SSN submarines, 2 Maintenance Trainers, and 4 Team Trainers with CCS Mk2 Block 1C. The AN/BSG-1 system received Milestone II approval on 27 May 1997.

WEAPONS SYSTEM COST ANALYSIS P-5			Weapon System	DATE: February 1998
APPROPRIATION/BUDGET ACTIVITY OTHER PROCUREMENT, NAVY / BA-4 ORDNANCE SUPPORT EQUIPMENT		ID Code	P-1 ITEM NOMENCLATURE/SUBHEAD SSN COMBAT CONTROL SYSTEM 0	

COST CODE	ELEMENT OF COST	ID Code	TOTAL COST IN THOUSANDS OF DOLLARS											
						FY 1997			FY 1998			FY 1999		
		B	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST
VB011	**FCS MK117/CCS MK1 IMPROVEMENTS**	A						**1,607**			**500**			**1,025**
	ECP/Auxillary Equipment							1,607			500			1,025
VB034	**CCS OER PROGRAM MODS**	B				***2***		**2,717**	***7***		**10,396**	***3***		**7,033**
	CCS MK2 Block 1C Upgrade Kits AN/BSG-1					2	$1,358.5	2,717	7	$1,485.1	10,396	3	$2,344.3	7,033
VB033	**PRODUCTION SUPPORT**							**1,643**			**1,527**			**1,573**
VB900	**CONSULTING SERVICES**							**1,088**			**1,016**			**1,380**
VB983	**LOGISTICS SUPPORT**							**4,659**			**3,355**			**3,599**
VB995	**INITIAL TRAINING**							**1,409**			**114**			**312**
	MATERIAL TOTAL							**13,123**			**16,908**			**14,922**
VB5NS	**EQUIPMENT INSTALLATION (FMP)**							**1,002**			**2,056**			**2,538**
TOTAL								**14,125**			**18,964**			**17,460**

BUDGET PROCUREMENT HISTORY AND PLANNING EXHIBIT (P-5A)	Weapon System	A. DATE February 1998
B. APPROPRIATION/BUDGET ACTIVITY Other Procurement, Navy BA-(4): (ORDNANCE SUPPORT EQUIPMENT)	C. P-1 ITEM NOMENCLATURE SSN COMBAT CONTROL SYSTEM	SUBHEAD H4VB 54200

Cost Element/ FISCAL YEAR	QTY	UNIT COST (000)	LOCATION OF PCO	RFP ISSUE DATE	CONTRACT METHOD & TYPE	CONTRACTOR AND LOCATION	AWARD DATE	DATE OF FIRST DELIVERY	SPECS AVAILABLE NOW	IF NO WHEN AVAILABLE
CCS MK2 OER										
BLOCK 1C UPGRADES (FY97)	2	1,358.5	NAVSEA		SS/FP	RAYTHEON ELECTRONIC SYSTEMS Portsmouth, RI	09/97	03/99	YES	
BLOCK 1C UPGRADES (FY98)	7	1,485.1	NAVSEA		SS/FP	RAYTHEON ELECTRONIC SYSTEMS Portsmouth, RI	03/98	11/99	YES	
BLOCK 1C UPGRADES (FY99)	3	2,344.3	NAVSEA		SS/FP	RAYTHEON ELECTRONIC SYSTEMS Portsmouth, RI	03/99	11/00	YES	

D. REMARKS

A CCS MK2 Block 1C upgrade will maximize use of commercial electronics and NDI standard products. TAC-X computers will be procured and integrated with the Combat Control System via fiber optic local area network and commercial electronics will be procured and packaged to replace the Data Transfer System (DTS), AN/UGC-136 keyboard printer and the Tactical Weapons Simulator (TWS).

CLASSIFICATION: **UNCLASSIFIED**

P3A **INDIVIDUAL MODIFICATION**

SSN COMBAT CONTROL SYSTEM (H4VB / 54200)

MODELS OF SYSTEM AFFECTED: CCS MK2 D0 to CCS MK2 D0 Block 1C TYPE MODIFICATION: UPGRADE MODIFICATION TITLE: SSN COMBAT CONTROL SYSTEM

DESCRIPTION/JUSTIFICATION:

This program replaces obsolete equipment and will achieve optimum commonality among submarine combat systems while maximizing the use of commercial electronics and NDI products.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: **MILESTONE II 05/96; TECHEVAL 7/99; OPEVAL 10/99; MILESTONE III 05/00**

	FY 1994 & Prior		FY 1995		FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$
FINANCIAL PLAN (IN MILLIONS)																								
RDT&E																								$0.0
PROCUREMENT																								$0.0
INSTALLATION KITS																								$0.0
INSTALLATION KITS NONRECURRING																								$0.0
EQUIPMENT							1	$1.1	2	$2.2			1	$1.2			2	$2.7					6	$7.2
EQUIPMENT NONRECURRING																								$0.0
ENGINEERING CHANGE ORDERS																								$0.0
DATA																								$0.0
TRAINING EQUIPMENT									3	$3.3									2	$2.0			5	$5.3
SUPPORT EQUIPMENT																								$0.0
OTHER																								$0.0
OTHER																								$0.0
INTERIM CONTRACTOR SUPPORT																								$0.0
ORDALT INSTALLATION								$1.0		$2.1		$0.6		$0.1		$0.5		$1.2		$0.2				$5.6
INSTALL COST											1	$0.9	2	$1.8			1	$1.4			2	$1.9	6	$5.9
TOTAL PROCUREMENT		$0.0		$0.0		$0.0	1	$1.1	5	$5.6	0	$0.0	1	$1.2	0	$0.0	2	$2.7	2	$2.0	0	$0.0	11	$12.5

P3A (Continued) **INDIVIDUAL MODIFICATION (Continued)**

MODELS OF SYSTEMS AFFECTED: **CCS MK2 D0 to CCS MK2 D0 Block 1C** MODIFICATION TITLE: SSN COMBAT CONTROL SYSTEM

INSTALLATION INFORMATION:
METHOD OF IMPLEMENTATION: **AIT**
ADMINISTRATIVE LEADTIME: PRODUCTION LEADTIME: 20-24 Months

CONTRACT DATES:	FY 1997: **Sep-97**	FY 1998: **Mar-98**	FY 1999: **Mar-99**
DELIVERY DATE:	FY 1997: **Mar-99**	FY 1998: **Nov-99**	FY 1999: **Nov-00**

($ in Millions)

Cost:	Prior Years		FY 1995		FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		To Complete		Total	
	Qty	**$**	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
PRIOR YEARS																							**0**	**0**
FY 1995 EQUIPMENT																							**0**	**0**
FY 1996 EQUIPMENT																							**0**	**0**
FY 1997 EQUIPMENT											**1**	**0.883**											**1**	**0.883**
FY 1998 EQUIPMENT													**2**	**1.796**									**2**	**1.796**
FY 1999 EQUIPMENT																							**0**	**0**
FY 2000 EQUIPMENT																	**1**	**1.354**					**1**	**1.354**
FY 2001 EQUIPMENT																							**0**	**0**
FY 2002 EQUIPMENT																					**2**	**1.859**	**2**	**1.859**
FY 2003 EQUIPMENT																							**0**	**0**
TO COMPLETE																							**0**	**0**

INSTALLATION SCHEDULE: SHIP AVAILABILITIES

	FY 1996	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001				FY 2002				FY 2003				TC	TOTAL
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		
In	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	1	0	0	0	0	0	0	2	6
Out	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	1	0	0	0	0	0	2	6

P-3A

CLASSIFICATION: **UNCLASSIFIED**

P3A **INDIVIDUAL MODIFICATION**

SSN COMBAT CONTROL SYSTEM (H4VB / 54200)

MODELS OF SYSTEM AFFECTED: AN/BSY-1 to CCS MK2 D0 Block 1C TYPE MODIFICATION: UPGRADE MODIFICATION TITLE: SSN COMBAT CONTROL SYSTEM

DESCRIPTION/JUSTIFICATION:

This program replaces obsolete equipment and will achieve optimum commonality among submarine combat systems while maximizing the use of commercial electronics and NDI products.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: **MILESTONE II 05/96; TECHEVAL 7/99 OPEVAL 10/99; MILESTONE III 05/00**

	FY 1994 & Prior		FY 1995		FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$
FINANCIAL PLAN (IN MILLIONS)																								
RDT&E																								$0.0
PROCUREMENT																								$0.0
INSTALLATION KITS																								$0.0
INSTALLATION KITS NONRECURRING																								$0.0
EQUIPMENT							1	$1.6	2	$4.6	3	$7.0	7	$16.6	5	$12.1	3	$7.4					21	$49.4
EQUIPMENT NONRECURRING																								$0.0
ENGINEERING CHANGE ORDERS																								$0.0
DATA																								$0.0
TRAINING EQUIPMENT													1	$2.4									1	$2.4
SUPPORT EQUIPMENT																								$0.0
OTHER																								$0.0
OTHER																								$0.0
INTERIM CONTRACTOR SUPPORT																								$0.0
ORDALT INSTALLATION																								$0.0
INSTALL COST											1	$1.0	2	$2.1	3	$3.9	7	$10.4	5	$5.9	3	$2.8	21	$26.1
TOTAL PROCUREMENT		$0.0		$0.0		$0.0	1	$1.6	2	$4.6	3	$7.0	8	$19.0	5	$12.1	3	$7.4	0	$0.0	0	$0.0	22	$51.7

P3A (Continued) **INDIVIDUAL MODIFICATION (Continued)**

MODELS OF SYSTEMS AFFECTED: **AN/BSY-1 to CCS MK2 D0 Block 1C** MODIFICATION TITLE: SSN COMBAT CONTROL SYSTEM

INSTALLATION INFORMATION:
METHOD OF IMPLEMENTATION: **AIT**
ADMINISTRATIVE LEADTIME: PRODUCTION LEADTIME: 20-24 Months

CONTRACT DATES:	FY 1997:	**Sep-97**	FY 1998:	**Mar-98**	FY 1999:	**Mar-99**
DELIVERY DATE:	FY 1997:	**Mar-99**	FY 1998:	**Nov-99**	FY 1999:	**Nov-00**

($ in Millions)

Cost:	Prior Years		FY 1995		FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		To Complete		Total	
	Qty	**$**	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
PRIOR YEARS																							**0**	**0**
FY 1995 EQUIPMENT																							**0**	**0**
FY 1996 EQUIPMENT																							**0**	**0**
FY 1997 EQUIPMENT											**1**	**1.040**											**1**	**1.04**
FY 1998 EQUIPMENT													**2**	**2.13**									**2**	**2.13**
FY 1999 EQUIPMENT															**3**	**3.899**							**3**	**3.899**
FY 2000 EQUIPMENT																	**7**	**10.37**					**7**	**10.37**
FY 2001 EQUIPMENT																			**5**	**5.92**			**5**	**5.92**
FY 2002 EQUIPMENT																					**3**	**2.789**	**3**	**2.789**
FY 2003 EQUIPMENT																							**0**	**0**
TO COMPLETE																							**0**	**0**

INSTALLATION SCHEDULE: SHIP AVAILABILITIES

	FY 1996	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001				FY 2002				FY 2003				TC	
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		TOTAL
In	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	3	0	1	1	2	2	1	3	2	0	0	3	21
Out	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	3	0	1	1	2	3	0	3	2	0	3	21

P-3A

CLASSIFICATION: **UNCLASSIFIED**

P3A **INDIVIDUAL MODIFICATION**

SSN COMBAT CONTROL SYSTEM (H4VB / 54200)

MODELS OF SYSTEM AFFECTED: CCS MK1 to CCS MK2 D0 Block 1C TYPE MODIFICATION: UPGRADE MODIFICATION TITLE: SSN COMBAT CONTROL SYSTEM

DESCRIPTION/JUSTIFICATION:

This program replaces obsolete equipment and will achieve optimum commonality among submarine combat systems while maximizing the use of commercial electronics and NDI products.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: **MILESTONE II 05/96; TECHEVAL 7/99; OPEVAL 10/99; MILESTONE III 05/00**

	FY 1994 & Prior		FY 1995		FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$
FINANCIAL PLAN (IN MILLIONS)																								
RDT&E																								$0.0
PROCUREMENT																								$0.0
INSTALLATION KITS																								$0.0
INSTALLATION KITS NONRECURRING																								$0.0
EQUIPMENT															3	$8.8	8	$22.9	6	$18.8			17	$50.6
EQUIPMENT NONRECURRING																								$0.0
ENGINEERING CHANGE ORDERS																								$0.0
DATA																								$0.0
TRAINING EQUIPMENT																								$0.0
SUPPORT EQUIPMENT																								$0.0
FIELD CHANGE KITS																								$0.0
OTHER																								$0.0
INTERIM CONTRACTOR SUPPORT																								$0.0
ORDALT INSTALLATION																								$0.0
INSTALL COST																			3	$15.5	14	$52.4	17	$67.9
TOTAL PROCUREMENT		$0.0		$0.0		$0.0		$0.0		$0.0		$0.0	0	$0.0	3	$8.8	8	$22.9	6	$18.8	0	$0.0	17	$50.6

P3A (Continued) **INDIVIDUAL MODIFICATION (Continued)**

MODELS OF SYSTEMS AFFECTED: **CCS MK1 to CCS MK2 D0 Block 1C** MODIFICATION TITLE: SSN COMBAT CONTROL SYSTEM

INSTALLATION INFORMATION:
METHOD OF IMPLEMENTATION: **Shipyard**
ADMINISTRATIVE LEADTIME: PRODUCTION LEADTIME: 20-24 Months

CONTRACT DATES:	FY 1997:	**Sep-97**	FY 1998:	**Mar-98**	FY 1999: **Mar-99**
DELIVERY DATE:	FY 1997:	**Mar-99**	FY 1998:	**Nov-99**	FY 1999: **Nov-00**

($ in Millions)

Cost:	Prior Years		FY 1995		FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		To Complete		Total	
	Qty	**$**	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
PRIOR YEARS																							**0**	**0**
FY 1995 EQUIPMENT																							**0**	**0**
FY 1996 EQUIPMENT																							**0**	**0**
FY 1997 EQUIPMENT																							**0**	**0**
FY 1998 EQUIPMENT																							**0**	**0**
FY 1999 EQUIPMENT																							**0**	**0**
FY 2000 EQUIPMENT																							**0**	**0**
FY 2001 EQUIPMENT																			**3**	**15.518**			**3**	**15.518**
FY 2002 EQUIPMENT																					**8**	**29.656**	**8**	**29.656**
FY 2003 EQUIPMENT																					**6**	**22.71**	**6**	**22.71**
TO COMPLETE																							**0**	**0**

INSTALLATION SCHEDULE: SHIP AVAILABILITIES

	FY 1996	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001				FY 2002				FY 2003				TC	
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		TOTAL
In	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	14	17
Out	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	15	17

CLASSIFICATION: **UNCLASSIFIED**

P3A **INDIVIDUAL MODIFICATION**

SSN COMBAT CONTROL SYSTEM (H4VB / 54200)

MODELS OF SYSTEM AFFECTED: AN/BSG-1 TYPE MODIFICATION: Upgrade MODIFICATION TITLE: SSN COMBAT CONTROL SYSTEM

DESCRIPTION/JUSTIFICATION:

This program provides a cost-effective, timely approach to meeting TLAM-N regeneration requirements and a common launcher interface across all attack submarines maximizing capabilities while minimizing operation, training and supportability costs.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: **MILESTONE II 05/97; TECHEVAL 10/99; OPEVAL 02/00; MILESTONE III 06/00**

	FY 1994 & Prior		FY 1995		FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$
FINANCIAL PLAN (IN MILLIONS)																								
RDT&E																							0	$0.0
PROCUREMENT																								
INSTALLATION KITS													10	$0.3	4	$0.1	33	$0.9					47	$1.3
INSTALLATION KITS NONRECURRING																								$0.0
EQUIPMENT													12	$2.3	3	$0.9	5	$1.0					20	$4.2
EQUIPMENT NONRECURRING																								$0.0
ENGINEERING CHANGE ORDERS																								$0.0
DATA																								$0.0
TRAINING EQUIPMENT													2	$0.1	1	$0.1							3	$0.1
SUPPORT EQUIPMENT																								$0.0
OTHER																								$0.0
OTHER																								$0.0
INTERIM CONTRACTOR SUPPORT																								$0.0
ORDALT INSTALLATION														$0.6		$2.6		$2.2		$0.6				$6.0
INSTALL COST																								$0.0
TOTAL PROCUREMENT											0	$0.0	24	$2.6	8	$1.1	38	$1.9	0	$0.0	0	$0.0	70	$5.6

P3A (Continued) **INDIVIDUAL MODIFICATION (Continued)**

MODELS OF SYSTEMS AFFECTED: **AN/BSG-1** MODIFICATION TITLE: SSN COMBAT CONTROL SYSTEM

INSTALLATION INFORMATION:
METHOD OF IMPLEMENTATION:
ADMINISTRATIVE LEADTIME: PRODUCTION LEADTIME: 24 Months

CONTRACT DATES:	FY 1997:		FY 1998:	FY 1999:	**Mar-99**
DELIVERY DATE:	FY 1997:		FY 1998:	FY 1999:	**Mar-01**

($ in Millions)

Cost:	Prior Years		FY 1995		FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		To Complete		Total	
	Qty	**$**	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
PRIOR YEARS																							**0**	**0**
FY 1995 EQUIPMENT																							**0**	**0**
FY 1996 EQUIPMENT																							**0**	**0**
FY 1997 EQUIPMENT																							**0**	**0**
FY 1998 EQUIPMENT																							**0**	**0**
FY 1999 EQUIPMENT																							**0**	**0**
FY 2000 EQUIPMENT																							**0**	**0**
FY 2001 EQUIPMENT																							**0**	**0**
FY 2002 EQUIPMENT																							**0**	**0**
FY 2003 EQUIPMENT																							**0**	**0**
TO COMPLETE																							**0**	**0**

INSTALLATION SCHEDULE: SHIP AVAILABILITIES

	FY 1996 & Prior	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001				FY 2002				FY 2003				TC	TOTAL
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		
In	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Out	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

P-3A

BUDGET ITEM JUSTIFICATION SHEET P-40	DATE: February 1998
APPROPRIATION/BUDGET ACTIVITY **OTHER PROCUREMENT, NAVY** **BA-4: Ordnance Support Equipment**	P-1 ITEM NOMENCLATURE/LINE ITEM # ***SUBMARINE ASW SUPPORT EQUIPMENT/543100***
Program Element for Code B Items:	OTHER RELATED PROGRAM ELEMENTS

	Prior Years	ID Code			FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total
QUANTITY					N/A	N/A	N/A	N/A	N/A	N/A	N/A		
EQUIPMENT COST (In Millions)					$9.8	$3.4	$3.7	$3.7	$3.9	$8.8	$5.0		$38.3
SPARES COST (In Millions)													

PROGRAM DESCRIPTION/JUSTIFICATION:

This line item procures modifications and improvements to Attack and Ballistic Missile Submarine fire control equipment, interface systems, torpedo tube system components and torpedo tube test equipment. These requirements arise as a result of the introduction of new or modified weapons and sensors and their subsequent evaluation test and operational use. Also procured are reliability, maintainability, functional and safety modifications and tactical improvements resulting from operational use experience.

This line funds modifications and improvements in the following categories:

6A001 - The Sub FCS ORDALTs category provides design modifications to in-service SSBNs and to provide reliability and maintainability improvements to Fire Control Interface Equipment's, interfacing systems, and to peripheral or special equipment, including Bearing and Range Indicators MK 116, Plotters MK 19, and Target Bearing Transmitters MK 17, of MK 117 FCS/CCS MK 1 and BSY-1 FCS installed in SSNs and SSBNs.

6A002 - The **Submarine Torpedo tube Support category** funds in-service support and alteration procurements for all submarine torpedo tubes ejection pumps, handling systems, and countermeasure launchers. Recurring efforts are CASREP support to the fleet units, emergency ORDALTs, Bore Gage/Test Equipment Procurement, Engineering Change Proposal support and prototype ORDALTs. ORDALTs kits are procured to correct significant deficiencies in equipment affecting personnel safety, ship safety and system performance.

6A830 - This is **production engineering services** in support of design modifications to in-service SSBNs and in relation to reliability of improvement to Fire Control Interface Equipment's and interfacing systems.

6A5IN - Installing agents will be various Naval Shipyards. All installations will be on SSN 688 Class Submarines.

The total objective for TEP Quieting ORDALTs is 37 units, total cost of $38.0 million. Seventeen (17) units were procured with FY 96 and prior funds, and four (4) units with FY 97 funds, (2) units in FY 98, (2) units procured in Budget year, remaining 12 units to be procured in subsequent years.

WEAPONS SYSTEM COST ANALYSIS P-5	Weapon System	DATE: February 1998

APPROPRIATION/BUDGET ACTIVITY	ID Code	P-1 ITEM NOMENCLATURE/SUBHEAD
Other Procurement, Navy **BA-4: ORDNANCE SUPPORT EQUIPMENT**		**SUBMARINE ASW SUPPORT EQUIPMENT/543100 846A**

COST CODE	ELEMENT OF COST	ID Code	TOTAL COST IN THOUSANDS OF DOLLARS											
						FY 1997			FY 1998			FY 1999		
			QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST
	SUBMARINE (N87)													
6A001	SUB F/C ORDALTs	A												
	SSN & SSBN ORDALTs							1,191						
6A002	SUB TORPEDO TUBE SUPPORT	A												
	O/A PROTOTYPE/ECP MATERIAL							411			224			269
	2J COG MATERIAL							435			219			265
	TEST EQUIPMENT													
	BORGE GAGE							321			177			261
	TEST FACILITY EQUIPMENT							461			267			323
	MISC. TEST EQUIPMENT							453			273			311
	TEP ORDALTs/TRIDS													
	O/A 16264 TEP QUIET 1					4	398.0	1,592	2	395.0	790	2	400.0	800
	TPES FIRING VALVE					8	102.0	816						
	SSN 688 MINE CAPABILITY													
	FIRE CONTROL PANEL (PORTABLE)					8	199.0	1,592						
6A830	PRODUCTION ENGINEERING							139						
	N87 SUBMARINE													
6A5IN	INSTALLATION OF EQUIPMENT (FMP)							**2,415**			**1,415**			**1,511**
	TOTAL EQUIPMENT							7,411			1,950			2,229
	TOTAL INSTALLATION							2,415			1,415			1,511
	GRAND TOTAL							**9,826**			**3,365**			**3,740**

BUDGET PROCUREMENT HISTORY AND PLANNING EXHIBIT (P-5A)	Weapon System	A. DATE
		February 1998

B. APPROPRIATION/BUDGET ACTIVITY	C. P-1 ITEM NOMENCLATURE	SUBHEAD
Other Procurement, Navy BA-4: ORDNANCE SUPPORT EQUIPMENT	SUBMARINE ASW SUPPORT EQUIPMENT/ 543100	846A

Cost Element/ FISCAL YEAR	QTY	UNIT COST (000)	LOCATION OF PCO	RFP ISSUE DATE	CONTRACT METHOD & TYPE	CONTRACTOR AND LOCATION	AWARD DATE	DATE OF FIRST DELIVERY	SPECS AVAILABLE NOW	IF NO WHEN AVAILABLE
FY 97										
6A002										
SUB TORPEDO TUBE	4	$398.0	NAVSEA		WR	NUWC NEWPORT, RI	Feb-97	Nov-97	YES	
TPES FIRING VALVE	8	$102.0	NAVSEA		WR	NUWC NEWPORT, RI	Feb-97	Nov-97	YES	
FIRE CONTROL PANEL	8	$199.0	NAVSEA		WR	NUWC NEWPORT, RI	Feb-97	Nov-97	YES	
FY 98										
6A002										
SUB TORPEDO TUB	2	$395.0	NAVSEA		WR	NUWC NEWPORT, RI	JAN-98	OCT 98	YES	
FY 99										
SUB TORPEDO TUBE O/A 16264 TEP QUIET 1	2	$400.0	NAVSEA		WR	NUWC NEWPORT, RI	DEC-98	SEP 99	YES	

D. REMARKS

P3A **INDIVIDUAL MODIFICATION**

MODELS OF SYSTEM AFFECTED: SUBMARINE ASW SUPPORT EQUIPMENT TYPE MODIFICATION: ORDALT MODIFICATION TITLE: SUB TORPEDO TUBE ORDALT 16264

DESCRIPTION/JUSTIFICATION:

PROJECT UNIT: ORDALT 16264 SUBMARINE TORPEDO EJECTION PUMP MK 5 MODS 15 THROUGH 20 UPGRADE REDUCES THE DETECTION AND CLASSIFICATION OF THE SSN 688 CLASS SUBMARINE WEAPON LAUNCH SIGNATURE.

IO= 37

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

	FY 1994 & Prior		FY 1995		FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$
FINANCIAL PLAN (IN MILLIONS)																								
RDT&E																								
PROCUREMENT																								
INSTALLATION KITS																								
INSTALLATION KITS NONRECURRING																								
EQUIPMENT	9	3.0	4	1.5	4	1.5	4	1.6	2	0.8	2	0.8	2	0.8	2	0.8	2	0.9	2	0.9	4	1.8	37	14.4
EQUIPMENT NONRECURRING																								
ENGINEERING CHANGE ORDERS																								
DATA																								
TRAINING EQUIPMENT																								
SUPPORT EQUIPMENT																								
OTHER																								
OTHER																								
OTHER																								
INTERIM CONTRACTOR SUPPORT																								
INSTALL COST	9	4.5		2.1		1.9		2.4		1.4		1.5		1.4		1.4		1.4		1.5		2.8		22.3
TOTAL PROCUREMENT	9	7.5	4	3.6	4	3.4	4	4.0	2	2.2	2	2.3	2	2.2	2	2.2	2	2.3	2	2.4	4	4.6	37	36.7

P3A (Continued) **INDIVIDUAL MODIFICATION (Continued)**

February 1998

MODELS OF SYSTEMS AFFECTED: **SUBMARINE ASW SUPP EQUIPMENT** MODIFICATION TITLE: SUB TORPEDO TUBE ORDALT 16264

INSTALLATION INFORMATION:
METHOD OF IMPLEMENTATION: **ORDALT/AIT**
ADMINISTRATIVE LEADTIME: 3 Months PRODUCTION LEADTIME: 9 MONTHS
CONTRACT DATES: FY 1997: FEB **97** FY 1998: JAN **98** FY 1999: DEC **98**
DELIVERY DATE: FY 1997: NOV **97** FY 1998: OCT **98** FY 1999: SEP **99**

($ in Millions)

Cost:	Prior Years		FY 1995		FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		To Complete		Total	
	Qty	**$**	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
PRIOR YEARS	**9**	**4.5**																					9	4.5
FY 1995 EQUIPMENT			**4**	**2.1**																			4	2.1
FY 1996 EQUIPMENT					4	1.9																	4	1.9
FY 1997 EQUIPMENT							4	2.4															4	2.4
FY 1998 EQUIPMENT									2	1.4													2	1.4
FY 1999 EQUIPMENT											2	1.5											2	1.5
FY 2000 EQUIPMENT													2	1.4									2	1.4
FY 2001 EQUIPMENT															2	1.4							2	1.4
FY 2002 EQUIPMENT																	2	1.4					2	1.4
FY 2003 EQUIPMENT																			2	1.5			2	1.5
TO COMPLETE																					4	2.8	4	2.8

INSTALLATION SCHEDULE: SHIP AVAILABILITIES

	FY 1996 & Prior	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001				FY 2002				FY 2003				TC	TOTAL
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		
In	17	0	0	2	2	0	0	1	1	0	0	1	1	0	0	0	2	0	0	0	2	0	0	2	0	0	0	2	0	4	37
Out	17	0	0	2	2	0	0	1	1	0	0	1	1	0	0	0	2	0	0	0	2	0	0	2	0	0	0	2	0	4	37

BUDGET ITEM JUSTIFICATION SHEET P-40													DATE: February 1998
APPROPRIATION/BUDGET ACTIVITY OTHER PROCUREMENT, NAVY BA-4, ORDNANCE SUPPORT EQUIPMENT								P-1 ITEM NOMENCLATURE/LINE ITEM # *SURFACE ASW SUPPORT EQUIPMENT, (544900) C46B*					
Program Element for Code B Items:								OTHER RELATED PROGRM ELEMENTS					
	Prior Years	ID Code			FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total
QUANTITY													0
EQUIPMENT COST (In Millions)					$8.2	$5.8	$5.0	$6.4	$6.7	$6.4	$6.5		$45.0
SPARES COST (In Millions)													0

PROGRAM DESCRIPTION/JUSTIFICATION:

This line item provides funding to procure Reliability, Maintainability and Availability (RM&A) and Safety modifications through the Ordnance Alteration (ORDALT) process to in-service ASW Fire Control, Surface Vessel Torpedo Tubes and related support and test equipment. These requirements arise as a result of evaluation, testing and Fleet use of existing, new or modified ASW weapons and/or related systems and subsystems. Included in this line item are all related procurements for training and simulation equipment required for the life cycle support efforts of this equipment. ORDALT quantities are highly variable. This budget reflects the transfer of design services into the appropriate equipment P-1 line item in accordance with full funding policies in FY98 and out.

Cost Code 6B001 provides funding for Ordnance Alteration (ORDALT) kits for the ASW Underwater Fire Control System (UFCS) MK 116 MOD 4 and the Control Panel MK 309 Mods 0 and 2. Funding for FY 97 - FY 98 includes MK116 MOD 4A upgrade for CG 52 to 55, (ORDALT 30447) Interfaces with C&D 2.9 and provides VLA capability. RM&A and safety ORDALTs quantities are highly variable.

(1) Installing Agent: All ORDALTs are installed via AIT.
(2) Installations will be accomplished over the remaining fiscal years, during TYCOM scheduled pier side availabilities.
(3) End items are variable, dependent on shipboard configuration and equipment affected.
Shoresites include: NSWC Dahlgren, NUWC Keyport and Fleet ASW School.

Cost Code 6B002 provides Material Support for the Underwater Fire Control System MK116 shore site laboratory at NSWC, Dahlgren and the Control Panel MK309 shore site laboratory at NUWC Keyport. Procurements will ensure laboratories are at Fleet baseline configurations.

Cost Code 6B004 provides funding for Surface Vessel Torpedo Tubes (SVTT) MK32 and ancillary equipment. FY97-98 ORDALT procurements include: SVTT: 15713, 16412, 16375, 16460, 16493, 16564, 16594, 16678, 16627, 16628; Torpedo Loading Tray: 15714, 16413; Air Charging Panel (TBD); and Torpedo Test Shape (TTS) (TBD). ORDALT procurements are highly variable, dependant on shipboard configurations and equipment age. Installations are highly variable, via AIT, based on pier side availabilities and ship homeports

(1) Installation agent: All ORDALTs are installed via AIT.
(2) Installations will be accomplished over the remaining fiscal years, during TYCOM scheduled pier side availabilities.
(3) End items are varible, dependant on shipboard configuration and equipment affected
Shoresites include: NUWC Newport, NSWC Louisville, and Fleet/Service School Commands.

Cost Code 6B007 provides funds for equipment upgrades as a result of Torpedo MK46 SLEP/MK 50 Bug 1/ MK 46 MOD 8. FY 97/98 will include changes to the Torpedo Presetter Test Set MK 432 Mod 4, (MK423 MOD 6) and Torpedo Setting Panel MK331, for MK 46/MK 50, Bug1/MK54 interfacing/integration changes. Outyear Procurements will be required for MK50 Bug1 and MK54.

BUDGET ITEM JUSTIFICATION SHEET P-40 CONTINUATION	DATE: February 1998
APPROPRIATION/BUDGET ACTIVITY **OTHER PROCUREMENT, NAVY** **BA-4, ORDNANCE SUPPORT EQUIPMENT**	**P-1 ITEM NOMENCLATURE/LINE ITEM #** ***SURFACE ASW SUPPORT EQUIPMENT, (544900) C46B***

Cost Code 6B011 is used to procure Surface Vessel Torpedo Tubes (SVTT) shore site laboratory equipment for Launcher System Facilities (LSF). LSF's are used to simulate Shipboard conditions for the over the side torpedo launchers in the trouble shooting of Fleet reported problems, as well as for the development of the required ORDALTs.

Cost Code 6B830 provides the necessary engineering support funds to cover the associated ILS elements, ECP reviews, and engineering audits for SVTT ORDALT production.

Cost Code 6B860 provides in-house navy acceptance test and evaluation funding required for the safety and quality assurance testing of all Fire Control ORDALTS.

Cost Code 6B900 provides the necessary funding for NAVSEA Headquarters (HQ) consulting services required to ensure all production efforts use NDI and COTS in conjunction with operation and safety requirements to include all ORDALT production, test, and installation scheduling.

Cost Code 6B5IN funding is for the Installation of all equipment (ORDALT and SHIPALTS) Under the Fleet Modernization Program (FMP). ORDALT AIT pierside installations are variable and contigent on TYCOM scheduling.

CLASSIFICATION: **UNCLASSIFIED**

WEAPONS SYSTEM COST ANALYSIS **P-5**	**Weapon System**	**DATE:** February 1998

APPROPRIATION/BUDGET ACTIVITY **Other Procurement, Navy** **BA-4, Ordnance Support Equipment**	ID Code	**P-1 ITEM NOMENCLATURE/SUBHEAD** **SURFACE ASW SUPPORT EQUIPMENT, (544900) C46B**

COST CODE	**ELEMENT OF COST**	**ID Code**	**TOTAL COST IN THOUSANDS OF DOLLARS**											
						FY 1997			**FY 1998**			**FY 1999**		
			QTY	**UNIT COST**	**TOTAL COST**	**QTY**	**UNIT COST**	**TOTAL COST**	**QTY**	**UNIT COST**	**TOTAL COST**	**QTY**	**UNIT COST**	**TOTAL COST**
	-													
6B001	**FIRE CONTROL ORDALTs**							**(787)**			**(594)**			**(713)**
	UFCS MK 116 ORDALTs							**474**			**314**			**378**
	CP MK 309 ORDALTs							**313**			**280**			**335**
6B002	**WEAPON CONTROL SUPPORT EQUIPMENT**							**(312)**			**(296)**			**(420)**
	CP MK 309 MATERIAL SUPPORT							**60**			**63**			**70**
	UFCS MK 116 MATERIAL SUPPORT							**252**			**233**			**350**
6B004	**TORPEDO TUBE ORDALTs**							**1,295**			**739**			**862**
6B005	**FCS SHIPBOARD TRAINING EQUIPMENT**							**300**			**-**			**-**
6B007	**TUBE/FC MK 50 INTEGRATION**							**793**			**375**			**427**
6B011	**SVTT MK 32 LAB SUPPORT EQUIPMENT**							**227**			**112**			**142**
6B830	**PRODUCTION ENGINEERING SUPPORT**							**459**			**276**			**83**
6B860	**FCS ACCEPTANCE T&E**							**267**			**84**			**80**
6B900	**CONSULTING SERVICES**							**580**			**249**			**211**
6B5IN	**FMP INSTALLATION OF EQUIPMENT**							**(3,184)**			**(3,041)**			**(2,029)**
	FIRE CONTROL/SVTT							**122**			**797**			**70**
	FUSS							**3,062**			**2,244**			**1,959**
TOTAL								**8,204**			**5,766**			**4,967**

REQUIREMENTS STUDY - NOT-INSTALLED NONCONSUMABLES P-23B

DATE: February 1998

APPROPRIATION/BUDGET ACTIVITY
OTHER PROCUREMENT NAVY
OPN BA-4 ORDNANCE SUPPORT EQUIPMENT

P-1 ITEM NOMENCLATURE
SURFACE ASW SUPPORT EQUIPMENT C46B

ITEM/PROJECT UNIT	TOTAL I0 / REQUIREMENT	QUANTITY ON HAND & NOT IN USE	QUANTITY IN USE	QUANTITY DUE IN WITH FY 96 & PRIOR FUNDS	QUANTITY DUE IN WITH FY 97 PROGRAM FUNDS	PLANNED BUDGET YEARS 98 PROCUREMENT	BALANCE	PHASING RATIONALE

MEMO ENTRIES

COST CODE: 6B001

SHIP CLASS	QTY
FFG 36	1
FFG 47	1
FFG 48	1
FFG 50-55	6
FFG 57	1
FFG 59	1
FFG 61	1
NUWC, KEYPORT	1
FLEASWSCH	1
TOTAL	14

6B005

SHIP CLASS	QTY
NSWC, DAHLGREN	2
FLEASWSCH	1
CG 52 - CG 55	4
TOTAL	7

P-1 SHOPPING LIST

ITEM NO. 160 PAGE NO. 4

BUDGET ITEM JUSTIFICATION SHEET P-40												DATE: February 1998	
APPROPRIATION/BUDGET ACTIVITY OTHER PROCUREMENT, NAVY BA 4 - ORDNANCE SUPPORT EQUIPMENT								P-1 ITEM NOMENCLATURE/LINE ITEM # *ASW Range Support Equipment /* 545500					
Program Element for Code B Items:								OTHER RELATED PROGRAM ELEMENTS N/A					
	Prior Years	ID Code			FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total
QUANTITY												N/A	0
EQUIPMENT COST (In Millions)					$2.4	$3.4	$4.6	$4.5	$5.0	$5.0	$5.2		$30.1
SPARES COST (In Millions)													0

PROGRAM DESCRIPTION/JUSTIFICATION:

Funding provides for the procurement of training range and shore support equipment, Test and Evaluation (T&E), and Acoustic Trial range equipment, and weapon system and test support equipment. Equipment procured includes instrumentation for Fleet Operational Readiness Accuracy Check Sites (FORACS) and Naval Undersea Warfare Center, Keyport (NUWC, KPT) T&E ranges, support equipment required to conduct Fleet exercises at Navy ASW Training ranges, Weapon System Accuracy Trials (WSAT) test, Surface Ship Radiated Noise Measurement (SSRNM), Sensor Accuracy Test (SAT), Ship ASW Readiness/Effectiveness Measuring (SHAREM) and Sonar Acoustic Target Source (SATS). Training and T&E ranges supported include Southern California Offshore Range (SCORE), Barking Sands Tactical Underwater Range/Barking Sands Underwater Range Extension (BARSTUR/BSURE), Atlantic Underwater Test and Evaluation Center (AUTEC), Atlantic Fleet Weapons Training Facility (AFWTF) (St. Croix), Nanoose, Quinault and Dabob Bay. FORACS ranges supported include Andros Island, Southern California, and Hawaii.

The project units have been consolidated for FY98 and the outyears. This adjustment was necessary due to the decreases in the level of funding for ASW Range Support Equipment.

6C001 - Weapon System and Test Support Equipment:
Funding provides for the procurement of high power ESM targets, Universal Radar Moving Target Transponder, range communication systems, replacement of obsolete range computers, ship auto-tracking system, Surface Ship Acoustic Range Components, a missile defense radar target, Sensor Accuracy Test (SAT) equipment, Ship ASW Readiness/Effectiveness Measuring (SHAREM), upgraded ship position tracking system and upgrade hardware for Sonar Acoustic Target Source (SATS) as a test and calibration target for the SQQ-89I, SQS-53C, BQQ-5E and BSY-1 sonars.

6C002 - Training/Test & Evaluation Range Equipment:
Funding provides for the procurement of shipboard underwater tracking equipment for the existing ranges as well as the new Shallow Water Training Ranges at both coasts and Hawaii, shop special purpose pinger test equipment, and the associated cables/mounting hardware required to track ships and submarines conducting Fleet exercises at the Navy training ranges. NAVSEA provides all of the Navy Underwater Ranges with this tracking equipment support, because the equipment must be compatible with NAVSEA designed and built underwater vehicles (i.e. ships, submarines, torpedoes, mines and sonars).
Funding provides for replacement and modernization of the following NUWC, KPT T&E range systems: Acoustic Noise Measuring Recording and Analysis System, Above Water Tracking System, RF and underwater communications equipment, and range data gathering equipment.

Production support services will fund support efforts performed by a field activity or contractor during the production phase of these projects.

WEAPONS SYSTEM COST ANALYSIS P-5			Weapon System	DATE: February 1998
APPROPRIATION/BUDGET ACTIVITY Other Procurement, Navy BA 4 - ORDNANCE SUPPORT EQUIPMENT		ID Code	P-1 ITEM NOMENCLATURE/SUBHEAD ASW Range Support Equipment / 83F4	

COST CODE	ELEMENT OF COST	ID Code	TOTAL COST IN THOUSANDS OF DOLLARS											
			FY 1997			FY 1998			FY 1999					
			QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST
	N86													
	EQUIPMENT													
6C001	Weapon System & Test Support Equip.							61			219			335
6C002	Training/Test & Evaluation Range Equip.							67			428			632
6C003	Test & Trial Support Equipment							41						
6C004	Proofing Range Equipment							182						
6C820	Consulting Services							25			41			88
6C830	Production Engineering							20			91			89
6C840	Quality Assurance							13						
6C850	Product Improvement							52			49			58
6C860	Acceptance, Test & Evaluation							10						
	N87													
	EQUIPMENT													
6C001	Weapon System & Test Support Equip.							247			686			943
6C002	Training/Test & Evaluation Range Equip.							273			1,341			1,760
6C003	Test & Trial Support Equipment							164						
6C004	Proofing Range Equipment							739						
6C820	Consulting Services							100			127			246
6C830	Production Engineering							79			287			248
6C840	Quality Assurance							53						
6C850	Product Improvement							208			153			163
6C860	Acceptance, Test & Evaluation							38						
TOTAL					**0**			**2,372**			**3,422**			**4,562**

BUDGET ITEM JUSTIFICATION SHEET
P-40

DATE: February 1998

APPROPRIATION/BUDGET ACTIVITY
OTHER PROCUREMENT, NAVY
BA-4: ORDNANCE SUPPORT EQUIPMENT

P-1 ITEM NOMENCLATURE/LINE ITEM #
EXPLOSIVE ORDNANCE DISPOSAL EQUIPMENT/BLI #5509

Program Element for Code B Items:
0603654N

OTHER RELATED PROGRM ELEMENTS
0603645N

	Prior Years	ID Code	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total
QUANTITY													**0**
EQUIPMENT COST (In Millions)	N/A	B	**N/A**	**N/A**	**$6.2**	**$7.3**	**$7.3**	**$8.9**	**$9.4**	**$9.5**	**$8.1**	**N/A**	**$56.7**
SPARES COST (In Millions)	N/A		***N/A***	**N/A**	**$3.6**	**$3.2**	**$3.9**	**$3.3**	**$3.4**	**$3.4**	**$3.4**	**N/A**	**$24.2**

PROGRAM DESCRIPTION/JUSTIFICATION:

The Navy is responsible for the management and execution of the Joint Service EOD unified procurement system as assigned by DOD Directive 5160.62. All procurement of EOD tools and equipment, both initial outfitting and replenishment, for all military services is made by the Navy. The Navy provides all procurement services. There is an annual average of 300 contracts for this material. Each military service funds it's own hardware.

VN001-NEW RSP EQUIPMENT: Initial outfitting of tools/equipment for increased allowances incident to correction of initial outfitting deficiencies and as required by EOD render-safe procedures.

VN005-MATERIAL FOR NAVAL SCHOOL EXPLOSIVE ORDNANCE DISPOSAL (NAVSCOLEOD): Provides ordnance material to NAVSCOLEOD for Joint Service training.

VN034-INITIAL OUTFIT EOD NR: EOD Naval Reserve Mobile Units/Detachments require initial outfitting of equipment on the Allowance List as approved by CNO.

VN057-MK 32/35 ACCESSORY SET: Hardware which allows for mine neutralization mission capabilities for MK 7 and MK 4 MMS

VN059-EOD MOBILE UNIT ALLOWANCE: Initial outfitting of tools/equipment for increased allowances on the CNO approved Allowance List.

VN062-MMS SHIPBOARD: Initial outfitting of hardware and production of animal behaviors which allows the MK 4 and MK 7 MMS to operate on a shipboard platform from the sea

VN063-ADVANCED RADIOGRAPHIC SYSTEM (ARS): ARS will improve current EOD x-ray capabilities by providing a portable, enhanced real time image and reduce the EOD technicians vulnerability to unexploded ordnance (UXO) and Improvised Explosive Devices (IEDs).

VN064-CLASSIFIED PROJECT I: Procurement of developed classified items.

VN065-MMS VERY SHALLOW WATER MINE COUNTERMEASURES (VSWMCM): This funding supports initial outfitting of hardware and animal behaviors required for the subject systems to operate in a limited hostile environment and enhance system survivability.

BUDGET ITEM JUSTIFICATION SHEET **P-40 CONTINUATION**	**DATE:** **February 1998**
APPROPRIATION/BUDGET ACTIVITY **OTHER PROCUREMENT, NAVY** **BA-4: ORDNANCE SUPPORT EQUIPMENT**	**P-1 ITEM NOMENCLATURE/LINE ITEM #** ***EOD EQUIPMENT/BLI #5509***

VN066-VSW ACCESSORY SET-Procurement of hardware which allows for the neutralization of mines in the VSW region which are subject to tidal surge and elevated currents.

VN830-PRODUCTION ENGINEERING: Review all technical data packages prior to procurement and provide procurement instruction to the procuring activity in support of the EOD unified procurement system. Provides production engineering support for all EOD and MMS production contracts.

VN850-PRODUCT IMPROVEMENT: Engineering services to improve EOD/MMS Systems/Equipment in production to improve maintainability, utilize current technology and decrease cost.

VN860-ACCEPTANCE, TEST & EVALUATION: Test, inspect, accept first articles and, on a 100% basis, the production quantity of EOD tools and equipment being procured. These tools are man-rated, and proper functioning of each item must be verified.

VNTNG-INITIAL TRAINING: Provide training support packages which include curriculum material for Joint Service EOD and Marine Mammal systems equipment.

LIGHTWEIGHT DISPOSABLE DEARMER (LIDD): Energetic device that provides the EOD Technician the capability to quickly and efficiently render-safe large quantities of UXO during a single incident. LIDD disrupts the firing train/fuzing of the UXO.

REMOTE ORDNANCE NEUTRALIZATION SYSTEM (RONS), EX3 MOD 0: RONS will consist of a remote controlled vehicle and operator control station (OCS). RONS will complement/augment the EOD Technician when performing reconnaissance, access, render-safe, "pick up and carry away" (PUCA), and disposal during extremely hazardous EOD missions.

MAIN CHARGE DISRUPTER (MCD): Lightweight "one-shot" energetic tool that is capable of reliably causing a low order detonation in large unexploded ordnance (UXO).

GAP RECONNAISSANCE IDENTIFICATION SYSTEM (GRIDS): An advanced force system which conducts very shallow water minefield exploration and reconnaissance in support of amphibious operations. GRIDS will operate clandestinely and detect all mine toes; buried, proud and moored. This funding support initial outfitting of all system hardware and components.

CLASSIFICATION: **UNCLASSIFIED**

WEAPONS SYSTEM COST ANALYSIS P-5			Weapon System	DATE: February 1998
APPROPRIATION/BUDGET ACTIVITY **Other Procurement, Navy** **BA-4: ORDNANCE SUPPORT EQUIPMENT**		ID Code	**P-1 ITEM NOMENCLATURE/SUBHEAD** **EXPLOSIVE ORDNANCE DISPOSAL EQUIPMENT/74VN**	

COST CODE	ELEMENT OF COST	ID Code	TOTAL COST IN THOUSANDS OF DOLLARS											
						FY 1997			FY 1998			FY 1999		
			QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST
	EXPLOSIVE ORDNANCE DISPOSAL (N85) EQUIPMENT													
VN001	NEW RSP EQUIPMENT	A						380			291			273
VN005	MATERIAL FOR NAVSCOLEOD	A						130			140			140
VN034	INITIAL OUTFIT NR	A				1	497	497	1	438	438	1	439	439
VN057	MK 32/35 ACCESSORY SET	A				275	5.8	1,590	253	5.8	1,462	67	5.8	389
VN059	EOD MU ALLOWANCE	A						1,018			1,840			1,642
VN062	MMS SHIPBOARD	A						1,188			908			849
VN063	ARS	B										111	13	1,476
VN064	CLASSIFIED PROJECT	A									200			
VN065	MMS VSWMCM	A									550			555
VN066	VSW ACCESSORY SET	A									305			410
VN830	PRODUCTION ENGINEERING	A						562			255			65
VN850	PRODUCT IMPROVEMENT	A						550			560			582
VN860	ACCEPTANCE, TEST & EVAL	A						270			280			290
VNTNG	INITIAL TRAINING	A						50			118			164
	TOTAL													
TOTAL								**6,235**			**7,347**			**7,274**

CLASSIFICATION: **UNCLASSIFIED**

BUDGET PROCUREMENT HISTORY AND PLANNING EXHIBIT (P-5A)	Weapon System	A. DATE February 1998

B. APPROPRIATION/BUDGET ACTIVITY	C. P-1 ITEM NOMENCLATURE	SUBHEAD
Other Procurement, Navy BA-4: ORDNANCE SUPPORT EQUIPMENT	EXPLOSIVE ORDNANCE DISPOSAL EQUIPMENT	74VN

Cost Element/ FISCAL YEAR	QTY	UNIT COST (000)	LOCATION OF PCO	RFP ISSUE DATE	CONTRACT METHOD & TYPE	CONTRACTOR AND LOCATION	AWARD DATE	DATE OF FIRST DELIVERY	SPECS AVAILABLE NOW	IF NO WHEN AVAILABLE
FISCAL YEAR (97)										
VN034	1	497			WR	NEODTD, INDIAN HEAD, MD	3/97	3/98	YES	
VN057	275	5.78	NRaD, SAN DIEGO, CA	5/97	FFP	NRaD, SAN DIEGO, CA	8/97	9/98	YES	
FISCAL YEAR (98)										
VN034	1	438			WR	NEODTD, INDIAN HEAD, MD	3/98	3/99	YES	
VN057	253	5.78	NRaD, SAN DIEGO, CA		FFP	NRaD, SAN DIEGO, CA	2/98	2/99	YES	
FISCAL YEAR (99)										
VN034	1	439			WR	NEODTD, INDIAN HEAD, MD	3/99	3/00	YES	
VN057	67	5.79	NRaD, SAN DIEGO, CA		FFP	NRaD, SAN DIEGO, CA	2/99	2/00	YES	
VN063	111	13.3			WR	NEODTD, INDIAN HEAD, MD	2/99	6/99	YES	

D. REMARKS

CLASSIFICATION:

BUDGET ITEM JUSTIFICATION SHEET P-40										DATE: February 1998	
APPROPRIATION/BUDGET ACTIVITY **OTHER PROCUREMENT, NAVY** **BA4: ORDNANCE SUPPORT EQUIPMENT**						**P-1 ITEM NOMENCLATURE/LINE ITEM #** **BLI: 551800** ***UNMANNED SEABORNE TARGETS/24VR***					
Program Element for Code B Items:						**OTHER RELATED PROGRAM ELEMENTS**					
	Prior Years	**ID Code**	**FY 1997**	**FY 1998**	**FY 1999**	**FY 2000**	**FY 2001**	**FY 2002**	**FY 2003**	**To Complete**	**Total**
QUANTITY		A	**0**	**6**	**6**	**4**	**5**	**3**	**5**	**Cont.**	**29**
EQUIPMENT COST (In Millions)			**$0.0**	**$2.2**	**$2.0**	**$1.9**	**$1.9**	**$1.1**	**$2.6**	**Cont.**	**$11.7**
SPARES COST (In Millions)											**$0.0**

PROGRAM DESCRIPTION/JUSTIFICATION:

Th Unmanned Seaborne Targets Program provides surface seaborne targets and target electronic augmentation systems for weapons systems test and evaluation and Fleet surface to surface and air to surface training. Target requirements include the High speed Mobile Sea Target (HSMST) MK1, an improved 40Knot plus capable HSMST, the MK42 Mod 0 Floating At Sea Target (FAST) and the Towed Trimaran, William Sled, and Improved Surface Towed Target (ISTT). Inventory objective changes based on Fleet usage.

VR005 - The Fleet requires High Speed Maneuverable Seaborne Targets (HSMST) MK1.

VR003, VR004 - The fleet also requires low cost expendable moving targets and stationary targets towed to the operating site for surface, aerial gunnery and missile shots. Trimarans, HARM/IR target, Williams Sleds, and ISTT with tow lines and retrieval systems meet these requirements. The FAST is a free floating radar reflective target developed as an open ocean training device for bombing and surface gunnery exercises. This program also procures seaborne target augmentation systems which include transponders(i.e. transmitters/receivers), radar reflectors, RF emitters and ground support equipment (GSE). Various electronic components provide the interface for the target control systems with the control stations/facilities for drone operations. RF emitters and radar reflectors enhance target threat replication and provide the required stimulus for anti-surface/radar weapons systems.

WEAPONS SYSTEM COST ANALYSIS		Weapon System	DATE:
P-5			February 1998

APPROPRIATION/BUDGET ACTIVITY	ID Code	P-1 ITEM NOMENCLATURE/SUBHEAD
Other Procurement, Navy BA4: ORDNANCE SUPPORT EQUIPMENT	A	UNMANNED SEABORNE TARGETS/24VR

COST CODE	ELEMENT OF COST	ID Code	TOTAL COST IN THOUSANDS OF DOLLARS											
			FY 1996			FY 1997			FY 1998			FY 1999		
			QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST
	OPNAV N864													
VR003	TOWED TARGETS	A						0			90			100
VR004	INSTRUMENTATION	A						0			261			0
VR005	HSMST MK1	A						0	6	147	880	6	147	882
VR830	PRODUCTION ENGINEERING	N/A						0			375			379
VR970	INTEGRATED LOGISTCS SUPPORT/DATA	N/A						0			368			370
VR900	CONSULTING SERVICES	N/A						0			244			223
TOTAL					**0**			**0**			**2,218**			**1,954**

BUDGET PROCUREMENT HISTORY AND PLANNING EXHIBIT (P-5A)	Weapon System	A. DATE February 1998
B. APPROPRIATION/BUDGET ACTIVITY Other Procurement, Navy BA4: ORDANCE SUPPORT EQUIPMENT	C. P-1 ITEM NOMENCLATURE UMANNED SEABORNE TARGETS	SUBHEAD 24VR

Cost Element/ FISCAL YEAR	QTY	UNIT COST (000)	LOCATION OF PCO	RFP ISSUE DATE	CONTRACT METHOD & TYPE	CONTRACTOR AND LOCATION	AWARD DATE	DATE OF FIRST DELIVERY	SPECS AVAILABLE NOW	IF NO WHEN AVAILABLE
FISCAL YEAR (98)										
HSMST	6	147	NAVSEA	Mar 98	C/FP	TBD	Jun 98	Sep 98	YES	
FISCAL YEAR (99)										
HSMST	6	147	NAVSEA	Dec 98	C/FP	TBD	Feb 99	Jun 99	YES	

D. REMARKS

CLASSIFICATION: **UNCLASSIFIED**

BUDGET ITEM JUSTIFICATION SHEET P-40	DATE: February 1998
APPROPRIATION/BUDGET ACTIVITY OTHER PROCUREMENT, NAVY BA:4 ORDNANCE SUPPORT	P-1 ITEM NOMENCLATURE/LINE ITEM # INDUSTRIAL FACILITIES/CALLIBRATION EQUIPMENT (84VZ) *BLI # 5542*
Program Element for Code B Items:	OTHER RELATED PROGRM ELEMENTS

	Prior Years	ID Code			FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total
QUANTITY													0
EQUIPMENT COST (In Millions)					$1.6	$1.3	$1.0	$1.0	$1.0	$1.0	$1.1		$8.0
SPARES COST (In Millions)													0

PROGRAM DESCRIPTION/JUSTIFICATION:

This line item provides funding for capital type rehabilitation projects at five (5) government-owned, contractor- operated plants for weapon systems such as the MK 41 Vertical Launching System, MK 45 Gun Mounts, MK 13/26 Launching Systems, MK 13/26 Launching Systems, Sonar Bow Domes, and PHALANX. Federal Acquisition Regulation Part 52.245-7 specifies facilities use contracts require government funding of capital type rehabilitation projects to support and maintain these facilities. These plants have an average age of 45 years and lack of proper maintenance will severely limit capabilities to maintain scheduled production rates and overall productivity. The following estimates are for capital type rehabilitation areas separated to reflect environmental, safety, energy conservation and major repairs.

ENVIRONMENTAL: Provides funds to eliminate environmental deficiencies in compliance with local, state, and federal regulations. These regulations mandate requirements which must be met if plant shutdowns, criminal liability, and severe financial penalties are to be avoided.

SAFETY: Provides funds to eliminate safety deficiencies in compliance with local, state, and federal OSHA regulations. These regulations mandate requirements which must be met if plant shutdowns and severe financial penalties are to be avoided.

ENERGY CONSERVATION MANAGEMENT: Provides funds for reducing energy consumption as mandated by Congress in 1993.

MAJOR REPAIR: Provides funds for critical upgrades to maintain high liability areas such as fire and security systems, roofs, boilers, electrical distribution systems, bridge crane systems, and other structural repairs essential to maintain the industrial integrity of the plant.

WEAPONS SYSTEM COST ANALYSIS P-5			Weapon System	DATE: February 1998
APPROPRIATION/BUDGET ACTIVITY Other Procurement, Navy BA-(4): (ORDNANCE SUPPORT EQUIPMENT)		ID Code	P-1 ITEM NOMENCLATURE/SUBHEAD INDUSTRIAL FACILITIES/CALLIBRATION EQUIPMENT (84VZ) BLI # 5542	

COST CODE	ELEMENT OF COST	ID Code	TOTAL COST IN THOUSANDS OF DOLLARS											
						FY 1997			FY 1998			FY 1999		
			QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST
VZ100	SURFACE SHIPS (N86)													
	Environmental				1684			777			319			266
	Safety				572			0			199			121
	Energy Conservation				1800			0			489			541
	Major Repair				1222			860			335			106
					375									
					2600									
					160									
					1700									
					4835									
TOTAL					**5,278**			**1,637**			**1,342**			**1,034**

BUDGET ITEM JUSTIFICATION SHEET
P-40

DATE: FEBRUARY 1998

APPROPRIATION/BUDGET ACTIVITY
OTHER PROCUREMENT, NAVY
BA 4: ORDNANCE SUPPORT EQUIPMENT

P-1 ITEM NOMENCLATURE/LINE ITEM #
STOCK SURVEILLANCE EQUIPMENT/554500

Program Element for Code B Items:

OTHER RELATED PROGRAM ELEMENTS

	Prior Years	ID Code			FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total
QUANTITY													0
EQUIPMENT COST (In Millions)					$1.4	$1.3	$1.4	$1.5	$1.5	$1.5	$1.6		10.2
SPARES COST (In Millions)													0

PROGRAM DESCRIPTION/JUSTIFICATION:

These funds are to procure test systems and equipment in support of the NAVSEA Quality Evaluation Program (O&M,N.) The purpose of this program is to (1) determine, through stock surveillance, the safety, reliability, readiness and service and shelf life of Navy and Marine Corps weapons systems through stockpile to target sequence tests.

The test equipment is for evaluations of in-service weapons such as mines, gun ammunition, missiles, and torpedoes and will be located at NAVSEA activities. Requirements for test equipment come from a need to replace obsolete or irreparable equipment or to acquire new or expanded test capability when new or modified weapons enter the stockpile, or when new evaluation techniques or processes are needed.

The equipment is generally "one of a kind" procurement and is used to support the generic ordnance types displayed in the P-5 exhibit.

WEAPONS SYSTEM COST ANALYSIS P-5			Weapon System	DATE: FEBRUARY 1998
APPROPRIATION/BUDGET ACTIVITY Other Procurement, Navy		ID Code	P-1 ITEM NOMENCLATURE/SUBHEAD STOCK SURVEILLANCE EQUIPMENT/554500 84V1	

COST CODE	ELEMENT OF COST	ID Code	TOTAL COST IN THOUSANDS OF DOLLARS											
						FY 1997			FY 1998			FY 1999		
			QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST
V1001	SURFACE SHIPS N86													
	Gun Ammunition Test Equipment							308			295			350
	Pyro/Demo Test Equipment							311			294			300
	Missile Test Equipment							327			203			298
	MC Ammunition Test Equipment							130			153			186
	Mine Test Equipment							332			317			287
TOTAL					**0**			**1,408**			**1,262**			**1,421**

BUDGET ITEM JUSTIFICATION SHEET P-40										DATE: February 1998	
APPROPRIATION/BUDGET ACTIVITY OTHER PROCUREMENT, NAVY BA-4: ORDNANCE SUPPORT EQUIPMENT						P-1 ITEM NOMENCLATURE/LINE ITEM # *FLEET MINE SUPPORT / 563500*					
Program Element for Code B Items:						OTHER RELATED PROGRM ELEMENTS					
	Prior Years	ID Code	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total
QUANTITY											$0.0
EQUIPMENT COST (In Millions)	N/A	A	$5.2	$5.0	$0.0	$2.4	$0.0	$0.0	$0.0	N/A	$12.6
SPARES COST (In Millions)	N/A	A	$0.0	$1.4	$0.2	$0.2	$0.2	$0.2	$0.2	N/A	$2.3

PROGRAM DESCRIPTION/JUSTIFICATION:

ITEM DESCRIPTION/JUSTIFICATION:

The Fleet Mine Support program provides for procurement of material and production support for readiness of all mines in stockpile. This includes both the service mine program and the Mine Exercise and Training (MET) Program in accordance with OPNAVNOTE C8550.

A service mine is an explosive undersea weapon for use against combat targets. It consists of an explosive loaded case, mine arming/firing actuation components and explosive initiators. Quantities and asset readiness objectives are described in OPNAVINST C8550.5M.
The requirements for the MET program are specified in OPNAVNOTE C8550. This program has two distinct facets: one supports the exercising of aircraft and submarine mine delivery forces to ensure delivery proficiency and the second supports the proficiency training of Surface and Airborne Mine Countermeasures (MCM) forces.
The material inventory involved in the Fleet Mine Support program is centrally managed by Naval Ordnance Command Inventory Management Systems Division for 6T-Cognizance Items.

PROGRAM FUNDS WILL BE USED TO PROVIDE THE FOLLOWING:

A. Production engineering support for mine assembly and loading, proof and test of mine components delivered from procurement. Certification of specialization/documentation relating to mine material to be procured, engineering and quality assurance services in support of mine material procurements and publications in support of component assembly and test for service and MET program. (VT010, VT051, VT830, VT840, VT860)

B. Procurement of service mine components and sub-assemblies required in support of mine assembly and maintenance to replace items of limited shelf-life such as batteries and pyrotechnics and other perishable or unserviceable items, procurement of components to improve mine operational characteristics and capabilities such as improved flight gear for compatibility with modern high speed aircraft. (VT300)

C. Procurement of mine materials to replace expended components used during the MET program for delivery proficiency. (VT310)

D. Procurement of mine materials to replace expended components used during the MET program for Mine Countermeasures (MCM) proficiency. (VT460)

E. Items to be procured in FY 97:
Sonar Transmitter MK 87
Holder, Transmitter
Battery 9.8 Volt
Battery MK 135
VEMS MK 75 (Qty. = 14)

F. Items to be procured in FY98:
Battery 9.8 Volt
Battery MK 135
VEMS MK 75 (Qty. = 3)

G. Items to be procured in FY 99:
None

WEAPONS SYSTEM COST ANALYSIS P-5			Weapon System	DATE: February 1998
APPROPRIATION/BUDGET ACTIVITY OTHER PROCUREMENT, NAVY / BA-4: ORDNANCE SUPPORT EQUIPMENT		ID Code A	P-1 ITEM NOMENCLATURE/SUBHEAD FLEET MINE SUPPORT / 563500	74VT

TOTAL COST IN THOUSANDS OF DOLLARS

COST CODE	ELEMENT OF COST	ID Code	FY 1996			FY 1997			FY 1998			FY 1999		
			QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST
	SPONSOR MINE WARFARE, N852													
VT010	MINE ASSEMBLY & LOADING							741			44			0
VT051	FLEET MINE SITE MATERIAL							342			48			0
VT300	ITEMS LESS THAN $500K	A						162			0			0
VT310	BATTERY REQUIREMENTS	A						187			90			0
VT460	VERSATILE EXERCISE MINE SYSTEM	A				14	126	1,764	3	368	1,104			0
	VEMS SUPPORT EQUIPMENT / PI							521			2,820			0
VT830	PRODUCTION ENGINEERING							439			528			0
VT840	QUALITY ASURANCE							171			46			11
VT860	PROOF & TEST MINE COMP. PROC							593			145			0
VT900	CONSULTING SERVICES							230			201			0
TOTAL								**5,150**			**5,026**			**11**

CLASSIFICATION: **UNCLASSIFIED**

BUDGET PROCUREMENT HISTORY AND PLANNING EXHIBIT (P-5A)	Weapon System	A. DATE
		February 1998

B. APPROPRIATION/BUDGET ACTIVITY	C. P-1 ITEM NOMENCLATURE	SUBHEAD
OTHER PROCUREMENT, NAVY / BA-4: ORDNANCE SUPPORT EQUIPMENT	FLEET MINE SUPPORT	74VT

Cost Element/ FISCAL YEAR	QTY	UNIT COST (000)	LOCATION OF PCO	RFP ISSUE DATE	CONTRACT METHOD & TYPE	CONTRACTOR AND LOCATION	AWARD DATE	DATE OF FIRST DELIVERY	SPECS AVAILABLE NOW	IF NO WHEN AVAILABLE
FISCAL YEAR 1997										
VT460 - VEMS	14	126.0	NAVSEA	N/A	SS/FFP/OPTION	BAeSEMA United Kingdom	12/96	8/97	YES	
VT460 - VEMS SPT EQUIP	VAR	VAR	NAVSEA	N/A	SS/FFP/OPTION	BAeSEMA United Kingdom	3/97	1/98	YES	
FISCAL YEAR 1998										
VT460 - VEMS	3	368.0	NAVSEA	N/A	SS/FFP/OPTION	BAeSEMA United Kingdom	3/98	1/99	YES	
VT460 - VEMS SPT EQUIP	VAR	VAR	NAVSEA	N/A	SS/FFP/OPTION	BAeSEMA United Kingdom	3/98	1/99	YES	

D. REMARKS

VT460 - SUPPORT EQUIPMENT INCLUDES: PRODUCT IMPROVEMENTS (ANECHOIC JACKETS, SONAR INSONIFICATION CAPABILITY, RADIO LINK CAPABILITY, ETC), ECPs. SEVERAL ANCILLARY ITEMS, AND CONTRACTOR ENGINEERING SUPPORT REQUIRED IN ADDITION TO VEM UNIT.

FY 1998/99 BUDGET PRODUCTION SCHEDULE, P-21						DATE **February 1998**					
APPROPRIATION/BUDGET ACTIVITY **OTHER PROCUREMENT, NAVY/BA-4: ORDNANCE SUPPORT EQUIPMENT**					Weapon System	P-1 ITEM NOMENCLATURE **FLEET MINE SUPPORT**					
		Production Rate			Procurement Leadtimes						
Item	Manufacturer's Name and Location	MSR	1-8-5	MAX	ALT Prior to Oct 1	ALT After Oct 1	Initial Mfg PLT	Reorder Mfg PLT	Total	Unit of Measure	
VT460 - VEMS	BAeSEMA	2	3	6	0	5	10	10	15	EACH	
	United Kingdom										

ITEM / MANUFACTURER	FY	SVC	QTY	DEL	BAL	FISCAL YEAR 1997												FISCAL YEAR 1998												BAL
						1996			CALENDAR YEAR 1997									CALENDAR YEAR 1998												
						OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
VEMS / BAeSEMA	97	EA	14	14	0						A								5	5	4								0
	98	EA	3	0	3													R					A							3

ITEM / MANUFACTURER	FY	SVC	QTY	DEL	BAL	FISCAL YEAR 1999												FISCAL YEAR 2000												BAL
						1998			CALENDAR YEAR 1999									CALENDAR YEAR 2000												
						OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
VEMS / BAeSEMA	97	EA	14	14	0																									0
	98	EA	3	3	3	3																								0
	99	EA	0	0	0																									0
	00	EA	3	0	3																									3
																														0

Remarks:

BUDGET ITEM JUSTIFICATION SHEET P-40	DATE: February 1998
APPROPRIATION/BUDGET ACTIVITY OTHER PROCUREMENT, NAVY BA-4 ORDNANCE SUPPORT EQUIPMENT	P-1 ITEM NOMENCLATURE/LINE ITEM # SURFACE TRAINING DEVICE MODIFICATION LI:566000
Program Element for Code B Items:	OTHER RELATED PROGRM ELEMENTS

	Prior Years	ID Code			FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total
QUANTITY													0
EQUIPMENT COST (In Millions)	N/A				$2.4	$8.6	$5.9	$7.2	$4.8	$4.4	$4.3	N/A	37.0
SPARES COST (In Millions)													0

PROGRAM DESCRIPTION/JUSTIFICATION:

(566000)
This line provides funds to modify/upgrade training devices to maintain systems at Fleet configuration and to enhance training capability.

(TS004) SURFACE TRAINING DEVICE MODS
Provides funding for minor modifications with a unit cost of less than $1.0M per device. These modifications are improvements/upgrades to in-service surface training systems identified by the program offices and training activities, and are approved by the Resource Sponsor. Modifications are required to meet safety standards, keep training systems compatible with equivalent changes made to fleet operational equipment, and to enhance training capabilities.

(TS001) CARRY-ON COMBAT SYSTEM TRAINER (COCST)
FY 98 funding includes Congressional funding for the Carry-On Combat Systems Trainers (COCST). COCST effort will provide a portable Battle Force Tactical TrainIng (BFTT)/Generic Stimulators/Simulators (GNSS) training capability for those ships not programmed to receive the BFTT/GNSS capability.

Funding to complete COCST procurement has been provided in FY 99 and FY 00. This system will provide a portable BFTT/GNSS training capability for those ships not programmed to receive the BFTT/GNSS capability.

CLASSIFICATION: **UNCLASSIFIED**

WEAPONS SYSTEM COST ANALYSIS P-5	Weapon System	DATE: February 1998

APPROPRIATION/BUDGET ACTIVITY	ID Code	P-1 ITEM NOMENCLATURE/SUBHEAD
Other Procurement, Navy BA-4 ORDNANCE SUPPORT EQUIPMENT		SURFACE TRAINING DEVICE MODIFICATION LI: 566000

COST CODE	ELEMENT OF COST	ID Code	TOTAL COST IN THOUSANDS OF DOLLARS											
			FY 1997			FY 1998			FY 1999					
			QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST
	SURFACE MODS (N85/N86)													
TS001	CARRY-ON COMBAT SYSTEM TRAINER (COCST)													
	Carry-On Combat Systems Trainer(N86)								2	1,898	3,795	2	1,250	2,500
TS004	SURFACE TRAINING DEVICE MODS													
	Surface Minor Mods (N85)													942
	Surface Minor Mods (N86)							2,441			4,829			2,449
	SUBTOTAL (N85)													942
	SUBTOTAL (N86)							2,441			8,624			4,949
TOTAL					**0**			**2,441**			**8,624**			**5,891**

BUDGET PROCUREMENT HISTORY AND PLANNING EXHIBIT (P-5A)	Weapon System	A. DATE February 1998
B. APPROPRIATION/BUDGET ACTIVITY Other Procurement, Navy BA-4 ORDNANCE SUPPORT EQUIPMENT	C. P-1 ITEM NOMENCLATURE SURFACE TRAINING DEVICE MODIFICATION LI:566000	SUBHEAD 84TS

Cost Element/ FISCAL YEAR	QTY	UNIT COST (000)	LOCATION OF PCO	RFP ISSUE DATE	CONTRACT METHOD & TYPE	CONTRACTOR AND LOCATION	AWARD DATE	DATE OF FIRST DELIVERY	SPECS AVAILABLE NOW	IF NO WHEN AVAILABLE
TS001 FISCAL YEAR (98) COCST	2	1,898	DCMC Towson, MD	N/A	BOA	AAI Corporation Hunt Valley, MD	12/97	7/98	YES	N/A
TS001 FISCAL YEAR (99) COCST	2	1,250	DCMC Towson, MD	N/A	BOA	AAI Corporation Hunt Valley, MD	12/97	7/98	YES	N/A

D. REMARKS

SIMULATOR AND TRAINING DEVICE JUSTIFICATION ($000)						Date February 1998			
Appropriation P-1 Line Item 566000		**Weapon System (if applicable)** N/A		**Equipment Nomenclature** Surface Training Device Modifications			**PE** 0804731N		
Fin Plan	**Prior Years**	**FY96**	**FY97**	**FY98**	**FY99**	**FY00**	**FY01**	**FY02**	**TOTAL**
Quantity		**0**	**VAR**	**VAR**	**VAR**	**VAR**	**VAR**	**VAR**	**VAR**
Proc		**$8,936**	**$2,441**	**$8,624**	**$5,891**	**$7,181**	**$4,806**	**$4,447**	**$42,326**
RDT&E									
O&S									

(L/I 566000)
This line provides funds to modify/upgrade training devices to maintain systems at Fleet configuration and to enhance training capability.

(TS004) SURFACE TRAINING DEVICE MODS
Provides funds for minor modifications with a unit cost of less than $1.0M per device. These modifications are improvements/upgrades to in-service surface training systems identified by the program offices and training activities, and are approved by the Resource Sponsor. Modifications are required to meet safety standards, keep training systems compatible with equivalent changes made to fleet operational equipment, and to enhance training capabilities.

(TS001) CARRY-ON COMBAT SYSTEMS TRAINER (COCST)
FY 98 funding includes Congressionally mandated funding for the Carry-On Combat Systems Trainer (COCST). COCST effort will provide a portable Battle Force Tactical Training (BFTT)/Generic Stimulators/Simulators (GNSS) training capaility for those ships not programmed to receive the BFTT/GNSS capability.

Funding to complete COCST procurement has been allocated in FY 99 and FY 00. This system will provide a portable BFTT/GNSS training capability for those ships not programmed to receive the BFTT/GNSS capability.

SIMULATOR AND TRAINING DEVICE JUSTIFICATION (Page 2) ($000)							Date				February 1998	
Appropriation P-1 Line Item Other Procurement, Navy LI: 566000		**Weapon System (if applicable)**		**IOC Date**			**Equipment Nomenclature** SURFACE TRAINING DEVICE MODS				**PE** 0804731N	
Device		**Delivery**	**Training**	**Student**			**FY97**		**FY98**		**FY99**	
By Type	**Site**	**Date**	**Date**	**Throughput**	**QTY**	**Cost**	**QTY**	**Cost**	**QTY**	**Cost**	**QTY**	**Cost**
TS004 SURFACE TRAINING DEVICE MODS												
VAR	VAR	VAR	VAR	N/A			VAR	$2,441	VAR	4,829	VAR	$3,391
TS001 CARRY-ON COMBAT SYSTEM TRAINER (COCST)												
COCST		First Unit 07/98	09/98	N/A					2	3,795		
		Second Unit 10/98	12/98	N/A								
		Third Unit 06/99	08/99	N/A							2	$2,500
		Fourth Unit 09/99	11/99	N/A								

P-1 SHOPPING LIST	PAGE NO.	
ITEM NO. 167	**5**	EXHIBIT P-43 page 2 of 2

BUDGET ITEM JUSTIFICATION SHEET
P-40

DATE: February 1998

APPROPRIATION/BUDGET ACTIVITY
OTHER PROCUREMENT, NAVY
BA-4 ORDNANCE SUPPORT EQUIPMENT

P-1 ITEM NOMENCLATURE/LINE ITEM #
SUBMARINE TRAINING DEVICE MODS / LI 5661

Program Element for Code B Items:

OTHER RELATED PROGRM ELEMENTS

	Prior Years	ID Code			FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total
QUANTITY													**0**
EQUIPMENT COST (In Millions)					$19.2	$22.5	$23.8	$26.1	$28.7	$15.0	$18.0		**$153.2**
SPARES COST (In Millions)													**0**

PROGRAM DESCRIPTION/JUSTIFICATION:

(L/I 5661)
This line provides funds to modify/upgrade training devices to keep them compatible with equivalent changes made to Fleet operational equipment and to enhance trainer systems capabilities.

(TD002) SUBMARINE TRAINING DEVICE MODS
Provides funding for minor modifications which are improvements/upgrades to in-service submarine training systems which are centrally managed systems . These improvements/upgrades are required to keep training systems compatible with equivalent changes made to fleet operational equipment and to change trainer capabilities to meet emergent training requirements.

(TD003) SUBMARINE COMBAT SYSTEM TEAM TRAINER (SCSTT) - DEVICE 21A43
To achieve desired submarine force readiness levels, it is necessary to construct highly sophisticated shorebased training facilities capable of training submarine combat system team personnel in all aspects of submarine approach, attack and surveillance operations in a controlled, simulated environment.

The Combat Control System (CCS) MK 1 and CCS MK 2 are installed, or being installed, on SSN 688 and SSBN 726 (TRIDENT) Class submarines. CCS MK 1 and AN/BSY-1 submarines received a block change in FY94 which installed C4.2 Revision 1. This change provides for Tomahawk Block III and partial Harpoon 1C weapons employment. CCS MK 1 submarines will receive Basic kits (initial update of CCS MK1 to CCS MK 2) and CCS MK 2 Block changes.

The CCS MK1 tactical program was upgraded in FY93 to include OTH Version 3.2.0, Global Positioning System (GPS) navigation interface, and the implementation of CCS MK1 C4.2 Revision 1. BSY-1 upgrades from the UYK-7 to the UYK-43 computer along with the above MK 1 enhancements via the BSY-1 ECI 010 program. CCS MK 2 ECP 006 will deliver concurrent with the CCS MK 2 DO Block 1 Program and includes Tomahawk Block III, Harpoon Block 1C, ADCAP mods, NTCSA, and ATWCS (Advanced Tomahawk Weapon Control System).

BUDGET ITEM JUSTIFICATION SHEET P-40 CONTINUATION	DATE: February 1998
APPROPRIATION/BUDGET ACTIVITY OTHER PROCUREMENT, NAVY BA-4 ORDNANCE SUPPORT EQUIPMENT	P-1 ITEM NOMENCLATURE/LINE ITEM # SUBMARINE TRAINING DEVICE MODS / LI 5661

The CCS MK2 tactical program is to be upgraded to include CCS MK 2 Block 1 C. This includes Combat Display Console (CDC) color/landscape, AN/BYH-1 SUBRASS replacement, CPU parallel processor removal, AN/UYK-44 removal, Mk 23 Graphic Plotter OER, Combat Team OnBoard Trainer (COBT), additional ADCAP upgrades, and FTAG improvements. CCS MK 2 Block 1 also introduces the Advanced Tomahawk Weapon Control System (ATWCS), NTCS-A and Tomahawk Block Improvement Program (TBIP) which consists of Tomahawk Weapon improvements.

The Submarine Multi Mission Team Trainer (SMMTT) Phases 1, 2, 3 program replaces the proprietary mainframe computer system by re-hosting functions on industry standard Local Area Network (LAN) workstations. The mainframes can no longer be upgraded due to service life. The SMMTT modification applies to both the CCS trainers and the acoustic trainers and will occur in three distinct phases. SMMTT Phase 1 provides partial offload of the trainer-unique software and provides additional processing power through the use of independent workstations. SMMTT Phase 2 completes the trainer-unique software offload and enables further enhancements. SMMTT Phase 3 will replace all MIL Standard hardware with commercial emulation hardware, enabling platform independence and wide area network capability. The use of open architecture trainer systems allows for the continuous growth of functional flexibility ultimately leading to employment training conducted for any submarine CCS. Plans are established to likewise upgrade submarine tactical systems to an open architecture, and the trainers will be compatible with the tactical interfaces.

FY97 Procures one SMMTT Phase 2 re-host of the SIM/STIM acoustic functions for CCS standalone mode for the CCS Engineering Production Model (EPM).

FY98 Procures the trainer unique hardware to upgrade the CC EPM at NUWC, Newport to provide SMMTT Phase 2 functions to support the Trainer EPM with the CCS Mk2 Block 1C upgrade. Procures one SMMTT Phase 1 Trainer upgrade kit to support CCS Mk2 D0 in the 21A43 SCSTT. Offloads selected weapons functions from CCS Mk1 Generalized Simulation Stimulation (GSS) software to SMMTT Phase 2 architecture for the CC EPM.

FY99 Offloads non-weapon functions of CCS Mk1 GSS software to SMMTT Phase 2 architecture.

BUDGET ITEM JUSTIFICATION SHEET P-40 CONTINUATION	DATE: February 1998
APPROPRIATION/BUDGET ACTIVITY OTHER PROCUREMENT, NAVY BA-4 ORDNANCE SUPPORT EQUIPMENT	P-1 ITEM NOMENCLATURE/LINE ITEM # SUBMARINE TRAINING DEVICE MODS / LI 5661

(TD005) SUBMARINE ACOUSTIC TRAINER - DEVICE 21B64

The AN/BQQ-5B/C/D(V) Series Sonar Systems are installed aboard SSN 594/637/688 Class submarines. The AN/BQQ-5E(V3)/(V4) will be is being installed aboard SSN 688 and SSBN 726 (TRIDENT) Class submarines. The Submarine Acoustic Trainer, Device 21B64, simulates the digital data processing and graphic displays of the associated AN/BQQ-5(V) tactical system. The Tactical Acoustic Rapid COTS (commercial-off-the-shelf) Insertion (ARCI) Phase I upgrades AN/BQQ5E(V) systems to incorporate dual array processing, full spectrum processing and low frequency active rejection capabilities.

Device 21B64 supports training for enlisted and officer pipelines. It provides individual operators and combat teams the opportunity to train ashore, prior to, and between deployments. The shore based training provides a means of maintaining team proficiency in stand alone or in combined team mode when tied to Device 21A series Attack Trainers.

FY97 upgrades the common Acoustic Trainer EPM with additional ARCI Phase I towed array capability; additional acoustic functions are re-hosted into SMMTT. FY97 will upgrade two trainers to the 21B64E(V) SMMTT Phase I supporting ARCI Phase I.

FY98 Procure modifications to offload the remainder of 21B64E(V) ARCI Phase I SIM/STIM software into the SMMTT Ph 2 architecture for the acoustic trainer EPM.

FY99 Procures modifications to the Acoustic Trainer EPM for the SMMTT Ph2 operating system software with selected upgrades to support the ARCI Phase II functionality. Procures modifications to the SMMTT Phase 2 software to support Medium Frequency Active Improvements (MFAI) for the Acoustic Trainer EPM.

(TD006) SSN COMBAT CONTROL OPERATOR TRAINER / COMMON BASIC OPERATOR TRAINER (CBOT)

The purpose of these devices is to provide pipeline training to submarine force personnel who require basic and advanced operator training and to provide refresher training to Fleet personnel designated to sustain their required level of operator competence. These devices train individual operators on the CCS MK 1/ MK 2, and AN/BSY-1 by supplementing classroom instructions with dynamic training exercises. Through the use of these training devices, the student obtains direct, interactive experience in Command, Weapon, Target Motion Analysis (TMA), and Over-The-Horizon (OTH) operations in order to develop the skills required for effective command and control operations.

BUDGET ITEM JUSTIFICATION SHEET P-40 CONTINUATION	DATE: February 1998
APPROPRIATION/BUDGET ACTIVITY OTHER PROCUREMENT, NAVY BA-4 ORDNANCE SUPPORT EQUIPMENT	P-1 ITEM NOMENCLATURE/LINE ITEM # *SUBMARINE TRAINING DEVICE MODS / LI 5661*

These devices provide an environment substantially equivalent to that found onboard ship, thus enabling students to develop and maintain the combat control expertise necessary to support Fleet operations. FY-90 established the requirement to provide advanced operator training for CCS MK 2 to support SSN 688, SSN 751 (AN/BSY-1), and TRIDENT SSBN (OHIO) Class submarines. The upgrades to the 21B63 operator trainer (OT) provides a common operator trainer capable of training all SSNs and SSBNs equipped with the CCS MK 2. To reduce life cycle cost, the 21B63 uses a subset of the 21A43 SCSTT simulation/stimulation hardware suite in its design. The Fire Control Submarine and IUSS Training Requirements Review (SITTR) of 6/92 established the requirements for Common Basic Operator Trainers (CBOT) to support revised A-School training pipelines.

FY98 Procures trainer unique software modifications to upgrade the CBOT EPM and the training site CBOTs with the CBOT Mk2 D0 Block 1C configuration.

FY99 Procures trainer unique software modifications to upgrade the CBOT EPM and the training site CBOTs with the CCS Mk2 D0 Block 1C link 16 functions configuration, and with Virtical Launch System training enhancements.

(TD011) AN/BSY-1 IMPROVEMENTS

AN/BSY-1 trainers support shorebased training for crews of SSN 751 Class submarines fitted with the AN/BSY-1 integrated Combat Control / Acoustic (CC/A). CC/A Team Trainers support subteam training in combat control and acoustics as well as full combat system team training. The AN/BSY-1 Team Trainer was baselined on two subsystem trainers: the CC subsystem is similar to a Device 21A43, and the acoustic subsystem is similar to a Device 21B64.
The Trainer SMMTT program will occur in two phases for the AN/BSY-1 Team Trainer: Phase 1 will upgrade BSY-1 trainers to the 21B64 SMMTT level, and Phase 2 will replace the obsolete mainframe with a distributive network system.

FY97 procures trainer unique hardware to upgrade the common acoustic EPM with the SMMTT Phase 2 configuration . FY97 also re-hosts selected BSY-1 functions into the SMMTT Phase 2 system.

FY98 Procures modifications to develop AN/BSY-1 SMMTT Phase 1 with ARCI Phase II functionality.

FY99 Procures modifications to SMMTT Phase 2 with AN/BSY 1 ARCI Phase II functionality. Procures two trainer upgrade kit for SMMTT Phase 1 with AN/BSY-1CC/A at ARCI Phase II and CCS Mk2 Block 1C functionality.

BUDGET ITEM JUSTIFICATION SHEET P-40 CONTINUATION	DATE: February 1998
APPROPRIATION/BUDGET ACTIVITY OTHER PROCUREMENT, NAVY BA-4 ORDNANCE SUPPORT EQUIPMENT	P-1 ITEM NOMENCLATURE/LINE ITEM # *SUBMARINE TRAINING DEVICE MODS / LI 5661*

(TD012) SUBMARINE BATTLE FORCE TACTICAL TRAINING (BFTT) DEVICE MODS

The requirement for the Submarine BFTT was established by the BFTT Operational Requirement Document (ORD) No. 2U648877 of 13 Mar 1992. The Submarine BFTT device consists of a carry-on unit that will provide the CO/OOD with a display depicting the position and modes of each participant and target in the BFTT scenario. This device will interface with and interpret the BFTT scenario and make use of the Tactical Advanced Simulated Warfare Integrated Trainer (TASWIT). The Submarine BFTT program will modify TASWIT software to reflect submarine combat systems displays and the interface with BFTT. It will consist of a computer and interface equipment with software designed to interface with and interpret the BFTT system, and to receive and transmit tactical data using own ship's communications equipment. This device is in tended to exercise the communications team and the CO/OOD, but not to provide training for the remaining submarine sensor operators and Combat System Team.

FY98 The FY98 buy consists of 12 units and accompanying software.

FY99 The FY99 buys consist of one unit.

(TD6IN) INSTALLATION OF EQUIPMENT

Funding is for the installation of trainers, installation support for trainers, and installations in other shore facilities.

WEAPONS SYSTEM COST ANALYSIS P-5							Weapon System			DATE: February 1998		
APPROPRIATION/BUDGET ACTIVITY Other Procurement, Navy BA-4 ORDNANCE SUPPORT EQUIPMENT					ID Code	P-1 ITEM NOMENCLATURE/SUBHEAD SUBMARINE TRAINING DEVICE MODIFICATIONS / 84TD						
COST CODE	ELEMENT OF COST	ID Code	TOTAL COST IN THOUSANDS OF DOLLARS									
			FY 1997			FY 1998			FY 1999			
			QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST
	SUBMARINE WARFARE (N87)													
TD002	SUBMARINE TRAINING DEVICE MODS							963			1,024			1,011
	Minor Mods							(963)			(1,024)			(1,011)
TD003	SUB COMB SYS TEAM TRAINER	A						3,455			6,407			6,248
	Modifications					1	(2,262)	(2,262)	1	(617)	(617)	1	(4,521)	(4,521)
	Modifications								1	(3,392)	(3,392)			
	Modifications								1	(780)	(780)			
	Tech Support							(1,193)			(1,618)			(1,727)
TD005	SUBMARINE ACOUSTIC TRAINER	A						9,699			6,938			7,870
	Modifications					2	(725)	(1,450)	1	(5,076)	(5,076)	1	(4,405)	(4,405)
	Modifications					1	(3,606)	(3,606)				1	(1,504)	(1,504)
	Modifications					1	(3,088)	(3,088)						
	Specialized Skills Trng							(103)			(103)			(44)
	Tech Support							(1,452)			(1,759)			(1,917)
TD006	SSN COMB CONT OPER TRAINER	A						0			1,331			1,519
	Modifications							(0)	4	(332)	(1,331)	5	(303)	(1,519)
TD011	DEVICE AN/BSY-1 TRAINER	A						4,456			4,347			6,259
	Modifications					1	(504)	(504)						
	Modifications					1	(3,732)	(3,732)	1	(4,213)	(4,213)	2	(801)	(1,602)
	Modifications											1	(4,470)	(4,470)
	Tech Support							(220)			(134)			(187)
TD012	SUBMARINE BAT FORCE TACT TRNG							0			1,830			104
	Carry-On CO/OOD Displays							(0)	12	(152)	(1,830)	1	(104)	(104)
	SUBTOTAL							18,573			21,877			23,011
TD6IN	INSTALLATION (Non-FMP)							628			613			790
TOTAL								**19,201**			**22,490**			**23,801**

BUDGET PROCUREMENT HISTORY AND PLANNING EXHIBIT (P-5A)	Weapon System	A. DATE
		February 1998

B. APPROPRIATION/BUDGET ACTIVITY	C. P-1 ITEM NOMENCLATURE	SUBHEAD
Other Procurement, Navy / BA-4	SUBMARINE TRAINING DEVICE MODIFICATIONS	84TD

Cost Element/ FISCAL YEAR	QTY	UNIT COST (000)	LOCATION OF PCO	RFP ISSUE DATE	CONTRACT METHOD & TYPE	CONTRACTOR AND LOCATION	AWARD DATE	DATE OF FIRST DELIVERY	SPECS AVAILABLE NOW	IF NO WHEN AVAILABLE
FISCAL YEAR (97)										
TD003										
CCS SMMTT ACOUS	1	2,262	NAVSEA	N/A	WX	NUWCDIV Newport, RI	03/97	01/00	YES	
TD005										
A-SMMTT 1 ARCI-I Kit	2	725	NAVSEA	10/96	SS/FF Opt	LMFS Manassas, VA	04/97	05/98	YES	
ACOUS Re-host	1	3,606	NAVSEA	10/96	SS/FF Opt	LMFS Manassas, VA	04/97	04/00	YES	
ACOUS ARCI - I TA	1	3,088	NAVSEA	10/96	SS/FF Opt	LMFS Manassas, VA	04/97	04/00	YES	
TD011										
BSY1/A SMMTT Ph2 h/w	1	504	NAVSEA	10/96	SS/FF Opt	LMFS Manassas, VA	04/97	04/98	YES	
BSY1/A Re-host BSY1	1	3,732	NAVSEA	10/96	SS/FF Opr	LMFS Manassas, VA	04/97	04/00	YES	

D. REMARKS

(TD0012)
The requirement for the Submarine BFTT was established by the BFTT Operational Requirement Document (ORD) No. 2U648877 of 13 Mar 1992.

BUDGET PROCUREMENT HISTORY AND PLANNING EXHIBIT (P-5A)	Weapon System	A. DATE February 1998
B. APPROPRIATION/BUDGET ACTIVITY Other Procurement, Navy / BA-4	C. P-1 ITEM NOMENCLATURE SUBMARINE TRAINING DEVICE MODIFICATIONS	SUBHEAD 84TD

Cost Element/ FISCAL YEAR	QTY	UNIT COST (000)	LOCATION OF PCO	RFP ISSUE DATE	CONTRACT METHOD & TYPE	CONTRACTOR AND LOCATION	AWARD DATE	DATE OF FIRST DELIVERY	SPECS AVAILABLE NOW	IF NO WHEN AVAILABLE
FISCAL YEAR (98)										
TD003										
SCSTT SMMTT 1 Mk 2 D0	1	617	NAVSEA	N/A	WX	NUWCDIV Newport, RI	03/98	05/98	YES	
CCS SMMTT 2 Mk2B1C	1	3,392	NAVSEA	NA/	WX	NUWCDIV Newport, RI	03/98	02/00	YES	
CCS SMMTT 2 GSS Weps	1	780	NAVSEA	N/A	WX	NUWCDIV Newport, RI	03/98	02/00	YES	
TD005										
A SMMTT 2 ARCI - I	1	5,076	NAVSEA	10/96	SS/FF Opt	LMFS Manassas, Va	02/98	04/00	YES	
TD006										
CBOT Mk2B1C	4	332	NAVSEA	N/A	WX	NUWCDIV Newport, RI	03/98	03/99	YES	
TD011										
BSY1/A SMMTT ARCI-II	1	4,213	NAVSEA	TBD	SS/FF Opt	LMFS Manassas, Va	02/98	04/00	YES	
TD012										
BFTT MODS	12	152	NAWC TSD	12/97	C/IQC	TBD	02/98	02/99	NO	12/97
FISCAL YEAR (99)										
TD003										
CCS SMMTT 2 Non-Weps	1	4,521	NAVSEA	N/A	WX	NUWCDIV Newport, RI	03/99	01/00	YES	
TD005										
A SMMTT2 ARCI - II	1	4,405	NAVSEA	10/96	SS/FF Opt	LMFS Manassas, Va	02/99	07/00	YES	
A SMMTT2 MFAI	1	1,504	NAVSEA	10/96	SS/FF Opt	LMFS Manassas, Va	02/99	07/00	YES	
TD006										
CBOT Mk2 Link 16/VLS	5	303	NAVSEA	N/A	WX	NUWCDIV Newport, RI	03/99	10/00	YES	
TD011										
BSY1 ARCI - II Kit	2	801	NAVSEA	10/96	SS/FF Opt	LMFS Manassas, Va	02/99	09/00	YES	
BSY1 SMMTT2 ARCI - II	1	4,470	NAVSEA	10/96	SS/FF Opt	LMFS Manassas, Va	02/99	09/00	YES	
TD012										
BFTT MODS	1	104	NAWC TSD	12/97	C/IQC Opt	TBD	02/99	02/00	NO	12/97

D. REMARKS

CLASSIFICATION: **UNCLASSIFIED**

P3A **INDIVIDUAL MODIFICATION**

MODELS OF SYSTEM AFFECTED: 21A43 SCSTT TYPE MODIFICATION: UPGRADES MODIFICATION TITLE: TD003 Combat System Team Trainer

DESCRIPTION/JUSTIFICATION:

Modifications include the procurement of modifications to support tactical improvements to all 21A43 Submarine Combat System Team Trainers (SCSTTs) and the Land Based Test Facility (LBTF). Other modifications are made as required by the Submarine Training/Trainer Work Group (STTWG), and Submarine Multi Mission Team Trainer (SMMTT) modifications. All installations are at shore-based sites; funding is budgeted to allow long-lead planning, site surveys, and preparation.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

	FY 1994 & Prior		FY 1995		FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$
FINANCIAL PLAN (IN MILLIONS)																								
RDT&E																							0	0.0
PROCUREMENT																								
INSTALLATION KITS																							0	0.0
INSTALLATION KITS NONRECURRING																								0.0
EQUIPMENT	15	4.0	1	3.5	1		1	3.5	3	6.4	1	6.2	6	7.8	5	7.0	2	2.5	3	3.0			**38**	**45.8**
EQUIPMENT NONRECURRING																								0.0
ENGINEERING CHANGE ORDERS																								0.0
DATA																								0.0
TRAINING EQUIPMENT																								0.0
SUPPORT EQUIPMENT																								0.0
OTHER																								0.0
OTHER																								0.0
OTHER																								0.0
INTERIM CONTRACTOR SUPPORT																								0.0
INSTALL COST					15	0.1	0	0.1	3	0.1	0	0.2	4	0.6	1	0.5	6	0.6	5	0.3	**4**		**38**	**2.5**
TOTAL PROCUREMENT	**15**	**4.0**	**1**	**3.5**	**1**	**2.0**	**1**	**3.5**	**3**	**6.4**	**1**	**6.2**	**6**	**7.8**	**5**	**7.0**	**2**	**2.5**	**3**	**3.0**	**0**	**0.0**	**38**	**48.3**

*NOTE: FY96 & Prior funds are provided from 87YZ LI8089

NOTE: The total program quantity reflects inventory objectives for this item.

P3A (Continued) **INDIVIDUAL MODIFICATION (Continued)**

MODELS OF SYSTEMS AFFECTED: **21A43 SCSTT** MODIFICATION TITLE: TD003 Combat System Team Trainer

INSTALLATION INFORMATION:
METHOD OF IMPLEMENTATION: **Navy Field Activity Teams with Prime Contractor Support.**
ADMINISTRATIVE LEADTIME: Months PRODUCTION LEADTIME: Months
CONTRACT DATES: FY 1997: **03/97** FY 1998: **01/98** FY 1999: **03/99**
DELIVERY DATE: FY 1997: **01/00** FY 1998: **05/98** FY 1999: **01/00**

($ in Millions)

Cost:	Prior Years		FY 1995		FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
PRIOR YEARS					15	0.1																	15	0.1
FY 1995 EQUIPMENT									1	0.0													1	0.0
FY 1996 EQUIPMENT							AP	0.1	1	0.0													1	0.1
FY 1997 EQUIPMENT							AP	0.0	AP	0.0	AP	0.0	1	0.1									1	0.2
FY 1998 EQUIPMENT									1	0.0	AP	0.1	2	0.3									3	0.4
FY 1999 EQUIPMENT											AP	0.1	1	0.2									1	0.3
FY 2000 EQUIPMENT													AP	0.0	1	0.4	5	0.5					6	0.8
FY 2001 EQUIPMENT															AP	0.1	1	0.1	4	0.3			5	0.5
FY 2002 EQUIPMENT																	AP	0.0	1	0.0	1	0.0	2	0.0
FY 2003 EQUIPMENT																			AP	0.0	3	0.0	3	0.0
TO COMPLETE																								

INSTALLATION SCHEDULE: SHIP AVAILABILITIES

	FY 1996 & Prior	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001				FY 2002				FY 2003				TC	TOTAL
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		
In	15	0	0	0	0	2	0	1	0	0	0	0	0	0	1	3	0	0	1	0	0	0	5	1	0	0	4	1	0	4	38
Out	15	0	0	0	0	0	2	0	1	0	0	0	0	0	0	1	3	0	0	1	0	0	0	5	1	0	0	4	1	4	38

P-3A

CLASSIFICATION: **UNCLASSIFIED**

P3A **INDIVIDUAL MODIFICATION**

MODELS OF SYSTEM AFFECTED: 21B64 TYPE MODIFICATION: UPGRADES MODIFICATION TITLE: TD005 Acoustic System Team Trainer

DESCRIPTION/JUSTIFICATION:

These modifications will upgrade trainers to the 21B64B/C/D/E (V)3/(V)4 configurations and Engineering for an Engineering Change Proposal (ECP) Development Model (EDM) to support the 21B64E (V)3. Provisions are also made to the 21B64 trainers to include block changes as a result of tactical AN/BQQ-5E and SMMTT modifications. All installations are at shore-based sites; funding is budgeted to allow long-lead planning, site surveys, and preparation.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

	FY 1994 & Prior		FY 1995		FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$
FINANCIAL PLAN (IN MILLIONS)																								
RDT&E																							0	0.0
PROCUREMENT																								
INSTALLATION KITS																							0	0.0
INSTALLATION KITS NONRECURRING																								0.0
EQUIPMENT			1	8.2	2	6.7	4	9.7	1	6.9	2	7.9	6	8.3	4	12.9	1	4.3	4	6.9			**25**	**71.8**
EQUIPMENT NONRECURRING																								0.0
ENGINEERING CHANGE ORDERS																								0.0
DATA																								0.0
TRAINING EQUIPMENT																								0.0
SUPPORT EQUIPMENT																								0.0
OTHER																								0.0
OTHER																								0.0
OTHER																								0.0
INTERIM CONTRACTOR SUPPORT																								0.0
INSTALL COST	0		0		0	0.1	1	0.4	4	0.1	0	0.2	6	0.3	0	0.5	5	0.6	5	0.3	**4**		**25**	**2.5**
TOTAL PROCUREMENT	**0**	**0.0**	**1**	**8.2**	**2**	**6.7**	**4**	**9.7**	**1**	**6.9**	**2**	**7.9**	**6**	**8.3**	**4**	**12.9**	**1**	**4.3**	**4**	**6.9**	**0**	**0.0**	**25**	**74.3**

P3A (Continued) **INDIVIDUAL MODIFICATION (Continued)**

MODELS OF SYSTEMS AFFECTED: **21B64** MODIFICATION TITLE: TD005 Acoustic System Team Trainer

INSTALLATION INFORMATION:
METHOD OF IMPLEMENTATION: **Navy Field Activity Teams with Prime Contractor Support.**
ADMINISTRATIVE LEADTIME: Months PRODUCTION LEADTIME: Months
CONTRACT DATES: FY 1997: **04/97** FY 1998: **02/98** FY 1999: **02/99**
DELIVERY DATE: FY 1997: **05/98** FY 1998: **04/00** FY 1999: **07/00**

($ in Millions)

Cost:	Prior Years		FY 1995		FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
PRIOR YEARS																								
FY 1995 EQUIPMENT							1	0.1															1	0.1
FY 1996 EQUIPMENT					AP	0.1	AP	0.1	2	0.0													2	0.2
FY 1997 EQUIPMENT							AP	0.2	2	0.1	AP	0.1	2	0.1									4	0.4
FY 1998 EQUIPMENT									AP	0.0	AP	0.1	1	0.0									1	0.1
FY 1999 EQUIPMENT											AP	0.0	2	0.1									2	0.1
FY 2000 EQUIPMENT													1	0.1	AP	0.4	3	0.3	2	0.1			6	0.9
FY 2001 EQUIPMENT															AP	0.1	2	0.3	2	0.1			4	0.5
FY 2002 EQUIPMENT																	AP	0.0	1	0.1			1	0.1
FY 2003 EQUIPMENT																			AP	0.0	4	0.2	4	0.2
TO COMPLETE																								

INSTALLATION SCHEDULE: SHIP AVAILABILITIES

	FY 1996 & Prior	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001				FY 2002				FY 2003				TC	TOTAL
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		
In	0	0	1	0	0	0	2	2	0	0	0	0	0	2	1	2	1	0	0	0	0	0	3	2	0	2	2	1	0	4	25
Out	0	0	0	1	0	0	0	2	2	0	0	0	0	0	2	1	2	1	0	0	0	0	0	3	2	0	2	2	1	4	25

P-3A

CLASSIFICATION: **UNCLASSIFIED**

P3A **INDIVIDUAL MODIFICATION**

MODELS OF SYSTEM AFFECTED: CCOT TYPE MODIFICATION: UPGRADES MODIFICATION TITLE: TD006 Combat Control Operator Trainer

DESCRIPTION/JUSTIFICATION:

The purpose of these trainers is to provide submarine force operator training in support of FCS MK117 and Mk1. The CBOT will support CCS MK1/MK2. All installations are at shore-based sites; funding is budgeted to allow long-lead planning, site surveys, and preparation.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

	FY 1994 & Prior		FY 1995		FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$
FINANCIAL PLAN (IN MILLIONS)																								
RDT&E																							0	0.0
PROCUREMENT																								
INSTALLATION KITS																							0	0.0
INSTALLATION KITS NONRECURRING																								0.0
EQUIPMENT	1	0.3	0	0.0	2	1.9	0	0.0	4	1.3	5	1.5	4	0.6	4	0.6	0	0.0	0	0.0			**20**	**6.2**
EQUIPMENT NONRECURRING																								0.0
ENGINEERING CHANGE ORDERS																								0.0
DATA																								0.0
TRAINING EQUIPMENT																								0.0
SUPPORT EQUIPMENT																								0.0
OTHER																								0.0
OTHER																								0.0
OTHER																								0.0
INTERIM CONTRACTOR SUPPORT																								0.0
INSTALL COST	0	0.0	1	0.0	0	0.1	0	0.2	2	0.0	4	0.1	0	0.1	5	0.0	8	0.0	0	0.0	**0**		**20**	**0.5**
TOTAL PROCUREMENT	**1**	**0.3**	**0**	**0.0**	**2**	**1.9**	**0**	**0.0**	**4**	**1.3**	**5**	**1.5**	**4**	**0.6**	**4**	**0.6**	**0**	**0.0**	**0**	**0.0**	**0**	**0.0**	**20**	**6.7**

P3A (Continued) **INDIVIDUAL MODIFICATION (Continued)**

MODELS OF SYSTEMS AFFECTED: **CCOT** MODIFICATION TITLE: TD006 Combat Control Operator Trainer

INSTALLATION INFORMATION:
METHOD OF IMPLEMENTATION: **Navy Field Activity Teams with Prime Contractor Support.**
ADMINISTRATIVE LEADTIME: Months PRODUCTION LEADTIME: Months
CONTRACT DATES: FY 1997: **N/A** FY 1998: **03/98** FY 1999: **03/99**
DELIVERY DATE: FY 1997: **N/A** FY 1998: **03/99** FY 1999: **10/00**

($ in Millions)

Cost:	Prior Years		FY 1995		FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
PRIOR YEARS					1	0.1																	1	
FY 1995 EQUIPMENT																								
FY 1996 EQUIPMENT					AP	0.0	AP	0.2	2	0.0													2	0.2
FY 1997 EQUIPMENT																							0	0.0
FY 1998 EQUIPMENT									AP	0.0	4	0.1											4	0.1
FY 1999 EQUIPMENT											AP	0.0	AP	0.0	5	0.0							5	0.0
FY 2000 EQUIPMENT													AP	0.1	AP	0.0	4	0.0					4	0.1
FY 2001 EQUIPMENT															AP	0.0	4	0.0					4	0.0
FY 2002 EQUIPMENT																								
FY 2003 EQUIPMENT																								
TO COMPLETE																								

INSTALLATION SCHEDULE: SHIP AVAILABILITIES

	FY 1996 & Prior	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001				FY 2002				FY 2003				TC	TOTAL
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		
In	1	0	0	0	0	0	2	0	0	0	4	0	0	0	0	0	0	0	5	0	0	0	8	0	0	0	0	0	0	0	20
Out	1	0	0	0	0	0	0	2	0	0	0	4	0	0	0	0	0	0	0	5	0	0	0	8	0	0	0	0	0	0	20

P-3A

CLASSIFICATION: **UNCLASSIFIED**

P3A **INDIVIDUAL MODIFICATION**

MODELS OF SYSTEM AFFECTED: AN/BSY-1 TEAM TRAINERS TYPE MODIFICATION: UPGRADES MODIFICATION TITLE: TD011 AN/BSY-1 CC/A Team Trainer

DESCRIPTION/JUSTIFICATION:

The modifications provide upgrades to match the tactical systems for the trainers and Acoustic and Combat Control Engineering Procurement Models (EPM) for the AN/BSY-1 trainers.
All installations are at shore-based sites; funding is budgeted to allow long-lead planning site surveys, and preparation

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

	FY 1994 & Prior		FY 1995		FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TC		TOTAL	
	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$	QTY	$
FINANCIAL PLAN (IN MILLIONS)																								
RDT&E																							0	0.0
PROCUREMENT																								
INSTALLATION KITS																							0	0.0
INSTALLATION KITS NONRECURRING																								0.0
EQUIPMENT	3	5.0	1	2.8	1	1.3	2	4.5	1	4.3	3	6.2	2	6.0	3	6.6	0	0.3	0	0.3			**16**	**37.3**
EQUIPMENT NONRECURRING																								0.0
ENGINEERING CHANGE ORDERS																								0.0
DATA																								0.0
TRAINING EQUIPMENT																								0.0
SUPPORT EQUIPMENT																								0.0
OTHER																								0.0
OTHER																								0.0
OTHER																								0.0
INTERIM CONTRACTOR SUPPORT																								0.0
INSTALL COST			2	0.2	1	0.0	1	0.0	2	0.4	0	0.2	4	0.2	1	0.1	3	0.0	1	0.0	**1**		**16**	**1.3**
TOTAL PROCUREMENT	**3**	**5.0**	**1**	**2.8**	**1**	**1.3**	**2**	**4.5**	**1**	**4.3**	**3**	**6.2**	**2**	**6.0**	**3**	**6.6**	**0**	**0.3**	**0**	**0.3**	**0**	**0.0**	**16**	**38.6**

P3A (Continued) **INDIVIDUAL MODIFICATION (Continued)**

MODELS OF SYSTEMS AFFECTED: **AN/BSY-1 TEAM TRAINERS** MODIFICATION TITLE: TD011 AN/BSY-1 CC/A Team Trainer

INSTALLATION INFORMATION:
METHOD OF IMPLEMENTATION: **Navy Field Activity Teams with Prime Contractor Support.**
ADMINISTRATIVE LEADTIME: Months PRODUCTION LEADTIME: Months
CONTRACT DATES: FY 1997: **03/97** FY 1998: **02/98** FY 1999: **02/99**
DELIVERY DATE: FY 1997: **04/98** FY 1998: **04/00** FY 1999: **09/00**

($ in Millions)

Cost:	Prior Years		FY 1995		FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		To Complete		Total	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
PRIOR YEARS	0		2	0.2	1	0.0																	3	0.2
FY 1995 EQUIPMENT			AP	0.0	AP	0.0	1	0.0															1	0.0
FY 1996 EQUIPMENT					AP	0.0	AP	0.0	1	0.2													1	0.2
FY 1997 EQUIPMENT							AP	0.0	1	0.2	AP	0.0	1	0.0									2	0.2
FY 1998 EQUIPMENT									AP	0.0	AP	0.1	1	0.1									1	0.2
FY 1999 EQUIPMENT											AP	0.1	2	0.1	1	0.1							3	0.3
FY 2000 EQUIPMENT													AP	0.0	AP	0.0	2	0.0					2	0.1
FY 2001 EQUIPMENT															AP	0.0	1	0.0	1	0.0	1	0.0	3	0.1
FY 2002 EQUIPMENT																								
FY 2003 EQUIPMENT																								
TO COMPLETE																								

INSTALLATION SCHEDULE: SHIP AVAILABILITIES

	FY 1996 & Prior	FY 1997				FY 1998				FY 1999				FY 2000				FY 2001				FY 2002				FY 2003				TC	TOTAL
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		
In	3	0	1	0	0	0	2	0	0	0	0	0	0	1	1	2	0	0	1	0	0	0	2	1	0	0	1	0	0	1	16
Out	3	0	0	1	0	0	0	2	0	0	0	0	0	0	1	1	2	0	0	1	0	0	0	2	1	0	0	1	0	1	16

P-3A

SIMULATOR AND TRAINING DEVICE JUSTIFICATION ($000)							DATE February 1998			
Appropriation P-1 Line Item 5661		**Weapon System (if applicable)** N/A			**Equipment Nomenclature** Submarine Training Device Mods			**PE** 0804731N		
Fin Plan	**Prior Years**		**FY97**	**FY98**	**FY99**	**FY00**	**FY01**	**FY02**	**FY03**	**TOTAL**
Quantity			**7**	**21**	**12**	**19**	**17**	**3**	**7**	**85**
Proc			**$19,201**	**$22,490**	**$23,801**	**$26,064**	**$28,668**	**$14,966**	**$18,002**	**$153,192**
RDT&E										
O&S										

(L/I 566100)
This line provides funds to modify/upgrade training devices to keep them compatible with equivalent changes made to Fleet operational equipment and to enhance trainer systems capabilities.

(TD002) SUBMARINE TRAINING DEVICE MODS
Provides funding for minor modifications which are improvements/upgrades to in-service submarine training systems which are centrally managed systems. These improvements/upgrades are required to keep training systems compatible with equivalent changes made to fleet operational equipment and to change trainer capabilities to meet emergent training requirements.

(TD003) SUBMARINE COMBAT SYSTEM TEAM TRAINER (SCSTT) - DEVICE 21A43
To achieve desired submarine force readiness levels, it is necessary to construct highly sophisticated shorebased training facilities capable of training submarine combat system team personnel in all aspects of submarine approach, attack and surveillance operations in a controlled, simulated environment. The Fire Control System (FCS) Mk 117, Combat Control System (CCS) MK 1 and CCS MK 2 are installed, or being installed, on SSN 688 and SSBN 726 (TRIDENT) Class submarines. CCS MK 1 submarines will receive Basic kits (initial update of CCS MK1 to CCS MK 2) and CCS MK 2 Block changes.

(TD005) SUBMARINE ACOUSTIC TRAINER - DEVICE 21B64
The AN/BQQ-5B/C/D(V) Series Sonar Systems are installed aboard SSN 594/637/688 Class submarines. The AN/BQQ-5E(V3)/(V4) will be installed aboard SSN 688 and SSBN 726 (TRIDENT) Class submarines The Submarine Acoustic Trainer, Device 21B64, simulates the digital data processing and graphic displays of the associated AN/BQQ-5(V) tactical system.

(TD006) SSN COMBAT CONTROL OPERATOR TRAINER / COMMON BASIC OPERATOR TRAINER (CBOT)
The purpose of these devices is to provide pipeline training to submarine force personnel who require basic and advanced operator trainer and to provide refresher training to Fleet personnel designated to sustain their required level of operator competence. These devices train individual operators on the FCS MK 117, CCS MK 1/ MK 2, and AN/BSY-1 by supplementing classroom instructions with dynamic training exercises.

	ITEM NO. 168	**PAGE NO.** **17**	EXHIBIT 43A PAGE 1 of 4 P-43 Simulator & Training Device Justification

* Note: FY96 funds are provided from 87YZ LI 8089

SIMULATOR AND TRAINING DEVICE JUSTIFICATION ($000)			DATE February 1998
Appropriation P-1 Line Item	**Weapon System (if applicable)**	**Equipment Nomenclature**	**PE**
5661	N/A	Submarine Training Device Mods	0804731N

(TD011) AN/BSY-1 IMPROVEMENTS

AN/BSY-1 trainers support shorebased training for crews of SSN 751 Class submarines fitted with AN/BSY-1 the integrated Combat Control / Acoustic (CC/A). CC/A Team Trainers support subteam training in combat contr and acoustics as well as full combat system team training.

(TD012) SUBMARINE BATTLE FORCE TACTICAL TRAINING (BFTT) DEVICE MODS

The Submarine BFTT device consists of a carry-on unit that will provide the CO/OOD with a display depicting the position and modes of each participant and target in the BFTT scenario. It will consist of a computer and interface equipment with software designed to interface with and interpret the BFTT system, and to receive and transmit tactical data using own ship's communications equipment.

(TD6NS) INSTALLATION OF EQUIPMENT

Funding is for the installation of trainers, installation support for trainers, and installations in other shore facilities.

	ITEM NO. 168	**PAGE NO.** **18**	EXHIBIT 43A PAGE 2 of 4 P-43 Simulator & Training Device Justification

* Note: FY96 funds are provided from 87YZ LI 8089

Classification **UNCLASSIFIED**

SIMULATOR AND TRAINING DEVICE JUSTIFICATION (Page 2) ($000)													DATE February 1998
Appropriation P-1 Line Item Other Procurement, Navy LI: 5661		**Weapon System (if applicable)**			**IOC Date**		**Equipment Nomenclature** SUBM TRAINING DEVICE MODS						**PE** 0804731N
Training Device By Type	**Site**	**Delivery Date**	**Ready for Training Date**	**Average Student Throughput**	**FY96**		**FY97**		**FY98**		**FY99**		
					QTY	**Cost**	**QTY**	**Cost**	**QTY**	**Cost**	**QTY**	**Cost**
TD002 SUBMARINE TRAINING DEVICE MODS													
VAR	VAR	VAR	VAR	N/A	VAR		VAR	$963	VAR	$1,024	VAR	$1,011
TD003 COMBAT CONTROL TEAM TRAINERS MODS													
21A43 SCSTT MK2 AC3	SUBSCOL, Groton	01/98	04/98	2,160									
CCS SMMTT ACOUS	NUWC, Newport	01/00	n/a	n/a			1	$2,262					
21A43 SCSST MK2 AC2	SUBTRACEN, Pearl	05/98	06/98	1,890					1	$617			
EPM MK2 BLOCK 1C	NUWC, Newport	02/00	n/a	n/a					1	$3,392			
EPM GSS WEPS	NUWC, Newport	02/00	n/a	n/a					1	$780			
EPM Non-WEPS	NUWC, Newport	01/00	n/a	n/a							1	$4,521	
TD005 ACOUSTIC OP TRAINERS MODIFICATIONS													
EPM/A PLOC	LMFS	04/98	n/a	n/a									
EPM/A Rehost	LMFS	04/98	n/a	n/a									
21B64E(V) SYS#6 ARCI - 1	SUBSCOL, Groton	07/98	09/98	1,612			1	$725					
21B64E(V) SYS#2 ARCI - 1	SUBTRACEN, Pearl	05/98	06/98	1,736			1	$725					
EPM/A TA	LMFS	04/00	n/a	n/a			1	$3,088					
EPM/A Acous	LMFS	04/00	n/a	n/a			1	$3,606					
EPM/A ARCI-I	LMFS	04/00	n/a	n/a					1	$5,076			
EPM/A MFAI	LMFS	07/00	n/a	n/a							1	$1,504	
EPM/A ARCI-II	LMFS	07/00	n/a	n/a							1	$4,405	
			P-1 SHOPPING LIST ITEM NO. **168**		**PAGE NO.** **19**		EXHIBIT P-43 page 3 of 4						

Classification: **UNCLASSIFIED**

Classification **UNCLASSIFIED**

SIMULATOR AND TRAINING DEVICE JUSTIFICATION (Page 2) ($000)											DATE	February 1998	
Appropriation P-1 Line Item Other Procurement, Navy LI: 5661		**Weapon System (if applicable)**		**IOC Date**			**Equipment Nomenclature** SUBM TRAINING DEVICE MODS				**PE** 0804731N	
Training Device By Type	**Site**	**Delivery Date**	**Ready for Training Date**	**Average Student Throughput**	**FY96**		**FY97**		**FY98**		**FY99**	
					QTY	**Cost**	**QTY**	**Cost**	**QTY**	**Cost**	**QTY**	**Cost**
TD006 SSN COMBAT CONTROL OP TRAINER MODIFICATION												
CBOT	SUBSCOL, Groton	06/98	07/98	1,000								
CBOT EPM	NUWC, Newport	06/98	n/a	n/a								
CBOT EPM MK2B1C	NUWC, Newport	03/99	n/a	n/a					1	$335		
CBOT MK2B1C	SUBSCOL, Groton	03/99	05/99	1,000					3	$332		
CBOT EPM LINK 16	NUWC	10/00	n/a	n/a							1	$304
CBOT EPM VLS	NUWC	10/00	n/a	n/a							1	$303
CBOT LINK 16 VLS	SUBSCOL, Groton	11/00	12/00	1,000							3	$304
TD011 AN/BSY-1 TRAINER MODIFICATION												
BSY1/A EPM 21B SMMTT	LMFS	04/98	n/a	n/a								
BSY1/A EPM SMMTT 2 HW	LMFS	04/98	n/a	n/a			1	$504				
BSY1/A EPM Rehost	LMFS	04/00	n/a	n/a			1	$3,732				
BSY1/A EPM ARCI-II	LMFS	04/00	n/a	n/a					1	$4,213		
AN/BSY-1 TT #1 ARCI -II	SUBSCOL, Groton	09/00	10/00	3,930							1	$801
AN/BSY-1 TT #2 ARCI-II	SUBTRACEN, Pearl	11/00	01/01	2,016							1	$801
BSY1/A EPM SMMTT 2	LMFS	07/00	n/a	n/a							1	$4,470
TDO12 SUBMARINE BATTLE FORCE TAC TRN												
BFTT c/o DEVICE MODS	SUBTRACEN, Pearl	02/99	05/99	n/a					3	$152		
BFTT c/o DEVICE MODS	SUBTRAFAC, Norva	02/99	05/99	n/a					3	$152		
BFTT c/o DEVICE MODS	SUBSCOL, Groton	02/99	05/99	n/a					3	$153		
BFTT c/o DEVICE MODS	SUBTRAFAC, SD	02/99	05/99	n/a					3	$153		
BFTT c/o DEVICE MODS	SUBTRACEN, Pearl	02/00	05/00	n/a							1	$104
			P-1 SHOPPING LIST ITEM NO. **168**		**PAGE NO.** **20**		EXHIBIT P-43 page 4 of 4					

Classification: **UNCLASSIFIED**

BUDGET ITEM JUSTIFICATION SHEET P-40	DATE: February 1998
APPROPRIATION/BUDGET ACTIVITY OTHER PROCUREMENT, NAVY BA:4 ORDNANCE SUPPORT EQUIPMENT	P-1 ITEM NOMENCLATURE/LINE ITEM # INDUSTRIAL DEPOT MAINTENANCE EQUIPMENT BLI# 5665
Program Element for Code B Items:	OTHER RELATED PROGRM ELEMENTS

	Prior Years	ID Code			FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total
QUANTITY													0
EQUIPMENT COST (In Millions)					$20.1								20.1
SPARES COST (In Millions)													0

PROGRAM DESCRIPTION/JUSTIFICATION:

ITEM DESCRIPTION/JUSTIFICATION: This line item provides for procurement and installation of equipment for the initial outfitting of military construction projects as NAS North Island. Depot equipment for initial outfitting of a Depot Level Maintenance Facility :

MCON P-701 Controlled Industrial Facility, NAS North Island (FR001):

These projects are required as depot equipment for Military Construction Project P701, Controlled Industrial Facility, as Naval Air Station North Island. MCON P701, programmed for FY 96 with a Base Operational Date (BOD) of November 1997, will provide depot level repair and maintenance of radiological propulsion plant systems and components of CVNs homeported at NAS North Island. These projects are required to fund the manufacture/procurement of the equipment listed for MCON P-701.

MCON P-702 Ship Maintenance Facility, NAS North Island (FR002):

These projects are required as depot equipment for Military Construction Project P702, Ship Maintenance Facility, as Naval Air Station North Island. MCON P702, programmed for FY 97 with a BOD of April 1998, will provide depot level repair and maintenance of non-radiological plant systems and components of CVNs homeported at NAS North Island. These projects are required to fund the manufacture/procurement of the equipment listed for MCON P-702.

****Program transferred from BA-7 OPN BLI # 8134.**

WEAPONS SYSTEM COST ANALYSIS P-5			Weapon System	DATE: February 1998
APPROPRIATION/BUDGET ACTIVITY Other Procurement, Navy BA:4 ORDNANCE SUPPORT EQUIPMENT		ID Code	P-1 ITEM NOMENCLATURE/SUBHEAD INDUSTRIAL DEPOT MAINTENANCE EQUIPMENT BLI# 5665	

COST CODE	ELEMENT OF COST	ID Code	TOTAL COST IN THOUSANDS OF DOLLARS											
						FY 1997			FY 1998			FY 1999		
			QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST
FR001	MCON P-701													
	Radiological Work Enclosures							2,492						
	Crane, Mobile, 150 Ton							1,908						
FR002	MCON P-702													
	Design Engineering Support							988						
	Callibration and Test Equipment							4,443						
	Chemistry Lab Equipment							3,306						
	Component Cleaning Equipment							360						
	Plant Equipment							431						
	Industrial Plant Equipment							5,931						
	NDT Equipment							262						
TOTAL					**0**			**20,121**			**0**			**0**